March 1949

WOOD PRODUCTS

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Well manufactured

HARDWOODS

for

WOODWORKING
INDUSTRIAL
& MILLWORK
PLANTS

●

FURNITURE SEMI-DIMENSION

INDUSTRIAL OAK

MILLWORK CUT STOCK

SPECIALTY CUTTINGS

YARD, FACTORY &
INDUSTRIAL LUMBER IN

RED & WHITE OAK

RED, BLACK & SAP GUM

ASH, CYPRESS, ELM

AND OTHER

COMMERCIAL SPECIES

●

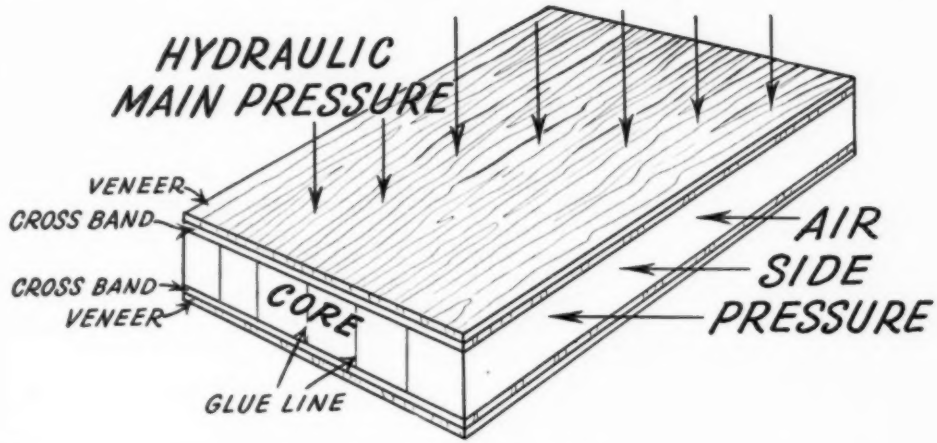
Call our nearest sales representative, or address:

CROSSETT LUMBER COMPANY CROSSETT ARKANSAS

Now...with a "VB" press

you can make panels

ALL IN ONE OPERATION!



Here is a hot press needed by scores of woodworking firms that does a complete panel making job with a minimum of time and labor, yet at a cost so low that it will soon pay for itself.

At a touch of a button, the series 20 "VB" hot press glues up the core stock, cross banding and face veneer at *one operation*—in from 2 to 2½ minutes with the cold setting resin glues, which in reality is a very rapid hot setting glue.

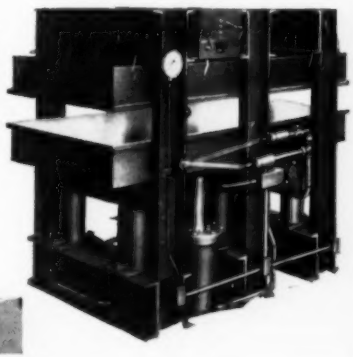
Saves in lumber stock, floor space, personnel and clamping equipment. Presses are self contained and come completely equipped with motor, pumps and controls. Automatic timer furnishes both hydraulic vertical pressure and pneumatic side pressure for core clamping. Easy to erect, simple and cheap to operate and does a variety of gluing jobs.

The Series 20 "VB" automatic hot press is ideal for firms not requiring a multi-opening press or for auxiliary work to such equipment. Write for full details and prices now.

★

Below is the "VB" hydraulic automatic hot press that has found such wide acceptance in plants all over the country for efficient veneering and laminating. Available in three sizes 36"x72"—44"x88"—36"x52". Gives high, safe production at lowest cost.

★



V. BERTHELSEN ENGINEERING WORKS INC. LOCKPORT ROAD P.O. BOX 1423 JOLIET, ILLINOIS

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SEWING MACHINES

It's little things that make a sale. Take a sewing machine for instance — the delicate, precise action of the shuttle — the quiet, smooth running gears — no skipping of stitches — these things give to the prospective buyer a solid feeling of dependability — a pride of ownership that everything about it is right.

Even the screws used in assembling such a machine have features which add definitely to the quality of the product. For because of snug fitting threads, true slots, heads which center and draw up tightly, everything is held in its proper place and parts work as intended — at the right time, and in the right places.

It's true, quality attracts quality.

That's why —

Quality features ELCO screws

Write for Catalog No. 48

ELCO TOOL AND SCREW CORPORATION
1908 BROADWAY ROCKFORD, ILLINOIS
WOOD SCREWS • MACHINE SCREWS • MACHINE SCREW NUTS
DRIVE SCREWS • CAP SCREWS • LAG SCREWS • SPECIAL SCREWS
TAPPING SCREWS • STOVE BOLTS • PIPE PLUGS

WOOD PRODUCTS

ABC

431 S. Dearborn St., Chicago 5, Illinois

Vol. 54 March, 1949 No. 3

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Front Cover Courtesy Birds Eye Veneer Company, Escanaba, Mich.

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REPRESENTATIVES

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Southern California: W. F. Green, 6605 Hollywood Blvd., Los Angeles 28, California, Phone Hemstead 3171

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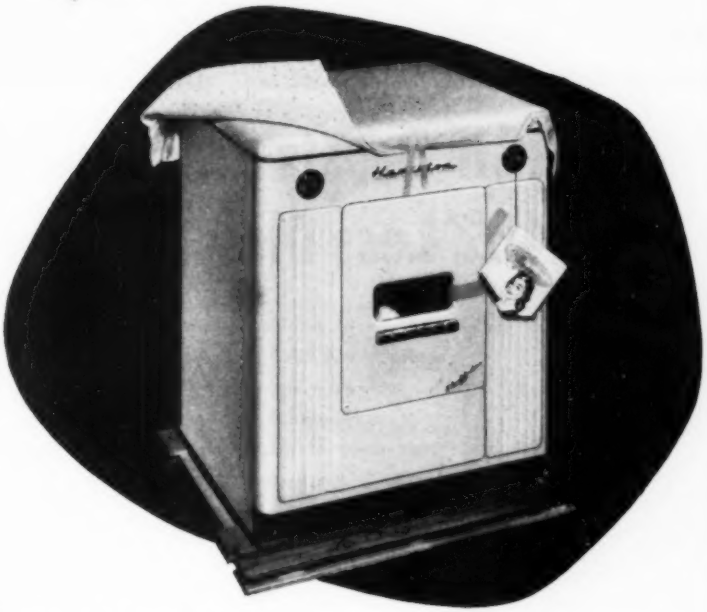
$2.00 per year; $3.00 for two years; single copies 25 cents; back copies 50 cents, when available. Canadian (duty paid) $3.50; foreign $4.00.

Kimpak* Float Packaging



Cuts shipping costs – reduces damage in transit!

Now—give your product *better* protection—save money—and deliver a more presentable package. KIMPAK is so easy to apply, it saves dozens of man-hours in the packaging operation. Soft, resilient, flexible—KIMPAK adds little to the shipping weight. And so efficient, that complaints and rejects due to damage enroute are rare.

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Thick cushioning blanket of KIMPAK is laid over top of cabinet and down sides.

Kraft bag is pulled over the KIMPAK cushioning and down to the base.

Corrugated head cap and the sides of wire-bound crate are placed in position.

Completed shipping package affords protection from damage to surface of cabinet.

All photographs courtesy of Hamilton Manufacturing Co., Two Rivers, Wis.

Kimpak
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES

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CREPED WADDING

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KIMBERLY-CLARK CORPORATION
Neenah, Wisconsin

Please send me free, the illustrated KIMPAK packaging guide.

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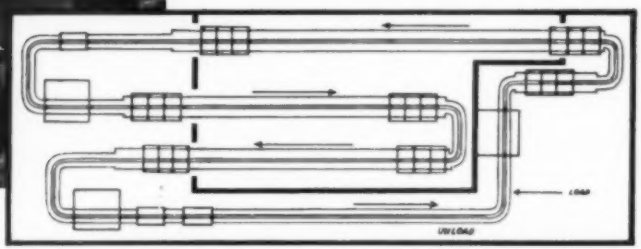
Workmen are always in the natural position to do their best work — at high production rates.

The case of a Michigan furniture manufacturer is typical, whose direct labor was decreased by 46% and production increased by 20% — in addition to a commitment of less floor space and general improvement of quality through a complete engineered finishing system.

Whether your production is large or small, the DeBurgh System will save you money and floor space, increase production and improve the quality of your product.

If these benefits sound good to you, you are a DeBurgh prospect. Let us analyze your requirements without obligation. Write for Bulletin 3-A.



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2. Excellent bond strength—Plywood, bonded with UFORMITES 505 or CB-553, has uniform strength, excellent service durability, good water resistance.

3. Dustless handling—The new UFORMITES are non-dusting; they simplify handling, measuring, and mixing.

4. Shorter processing schedules—UFORMITE 505 has fast "snap" in the hot press—cuts pressing schedules, keeps up bond quality.

5. Compatibility with extenders—Improved compatibility with such extenders as wheat flour permits use of economical extended mixes to provide bonds with good water resistance and strength—and at low cost.

6. Product uniformity—Exacting production specifications assure uniform pot life, good spreadability, ease of handling.

7. Stability in storage—UFORMITE powders can be stored in a cool dry place for a year without change in properties.

For better bonding in shorter time at lower cost, send for full details of UFORMITES today. We'll be glad to discuss the advantages of these improved urea-formaldehyde resins in your specific application.

UFORMITE 505
UFORMITE CB-553

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TEGO Resin Film—A phenolic, hot press adhesive for boil-proof bonds of proven durability. Especially adapted to thin and fragile veneers.

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UFORMITE CB-552—Pre-catalyzed urea formaldehyde adhesive for cold bonding and assembly gluing.

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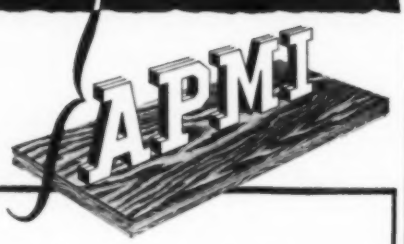
ROHM & HAAS COMPANY
THE RESINOUS PRODUCTS DIVISION
Washington Square Philadelphia 5, Pa.
The Resinous Products Division was formerly The Resinous Products & Chemical Company

The Trademark with 14 HOMES!



The plywood produced by Associated Plywood Mills is available quickly at 14 different locations in the United States. That means you can get what you want when you want it—and in the quantity desired. Quality *plus* service is our policy—and your assurance of prompt delivery.

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ASSOCIATED
Plywood Mills, Inc.

General Office—EUGENE, OREGON

Question & Comment

How to Build a Dry Kiln?

349-1
Editor Wood Products:

We are a subscriber to your magazine which we find very helpful in our operation.

We are desirous of building a small kiln for the purpose of drying lumber, for a capacity of 8,000-16,000 board feet. We have not been successful in locating any technical information and are curious to know if you could supply us with a design for this type kiln. Perhaps one of your back issues includes information on this subject. If not, could you direct us to the proper source?

A. C.

The Availability of Bamboo Strips

349-2
Editor Wood Products:

In the January issue of Wood Products Magazine we note with interest the request in your "Question and Comment" column for information on Bamboo strips $\frac{1}{4}$" x 10" size and we are herewith enclosing our reply to this inquiry.

It has also occurred to us that it may be of interest to the many readers of this column to learn of the availability of this material. During the war it was of course not possible to import Bamboo and this item once again becoming available may be a note of interest to your subscribers.

We can now supply Bamboo poles from the small $\frac{1}{2}$" size to the giant Bamboo 4" to 6" in diameter. Full round poles or half round moulding and in any length up to 16'; Oriental Bamboo from China and Japan, Calcutta and Brazilian Bamboo are a few of the varities available.

E. S. Co.

Beaded Glue Wanted

349-3
Editor Wood Products:

We are interested in obtaining a source of supply of what is commonly known, in this section, as Beaded Glue. This is to be used in Electric Glue Pots for both fabric and wood glue. Any information that you may be able to send us will be greatly appreciated.

W & G

Wants Ponderosa Pine Shorts

349-4
Editor Wood Products:

In December, 1948 issue, under the Question and Comment column you mentioned Ponderosa Pine Shorts as "available waste."

If you do have a list of concerns who accumulate and would sell such shorts, please send us their names. We should like to contact them.

T. W. Mfg. Co.

Wooden Pails and Kegs

349-5
Editor Wood Products:

Please find enclosed check for a subscription to "Wood Products" Magazine.

I also would appreciate it very much, if you could give me the address of a factory making wooden pails and kegs.

B. W. Co.

SMOOTHER CUTTING
Tooth-set is miked on every Simonds Narrow Band Saw. And teeth are set on *both* sides to within .001" to .002". So there's no dragging in the cut. In addition, proper tooth-hook is assured by special gages on Simonds presses.
FASTER RUNNING
Large, round gullets relieve strains of bending and cutting by distributing these strains over more surface, so permitting higher operating speeds. And all teeth are filed extra-sharp.
LONGER LASTING
Special saw steel, poured in Simonds mills, puts top toughness into Simonds Narrow Band Saws. And the rounded blade-backs help to prevent cracking from case-hardening. What's more, *welded joints* give a stronger, stiffer joint than brazing or other methods.
SIMONDS ALSO MAKES:
"RED CENTER" CIRCULAR SAWS (Solid Tooth, Also Inserted Point)
"RED BACK" MACHINE KNIVES (For every woodworking job)
SIMONDS WIDE BAND SAWS (Also Disc Saws & Band Resaws)
"RED TANG" FILES & "RED END" HACKSAWS (For every maintenance job)
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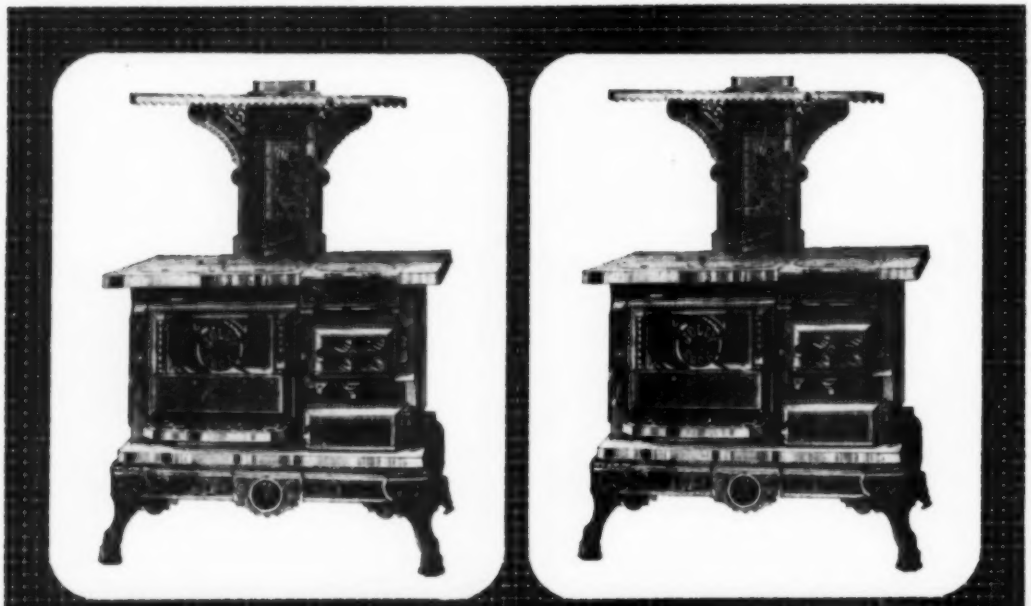
BRANCH OFFICES: 1350 Columbia Road, Boston 27, Mass.; 127 S. Green St., Chicago 7, Ill.; 416 W. Eighth St., Los Angeles 14, Calif.; 220 First St., San Francisco 5, Calif.; 511 S. W. First Avenue, Portland 4, Ore.; 51 W. Trent Avenue, Spokane 8, Washington. *Canadian Factory*: 595 St Remi St., Montreal 30, Que.
SIMONDS
NARROW BAND SAWS



This "portable (!) range" was considered a miracle of convenience in 1887. It had a patent hinge to safeguard the proud owners from asphyxiation! And it may even have featured Blake & Johnson stove bolts. When the "Jolly Cook" was born, we had been serving cooking and heating equipment manufacturers (among others) for 38 years!

100 years of business as the same company—under the same name—places us among the ancients in American industry. But hardening of the arteries has never set in! Only six years ago, Blake & Johnson introduced the most revolutionary advance in the history of fastenings—the Twin-Fast twin thread wood screw, now accepted everywhere as the wood screw of today and tomorrow. Knowing that the first 100 years are the hardest, manufacturers can be sure that Blake & Johnson, too, is here to stay!

Write for catalog of complete line of Blake & Johnson fastenings.

Machine Screws and Nuts, Wood Screws, Stove Bolts, Tapping Screws

Screw Machine Products, Wire Forms, etc.

THE BLAKE & JOHNSON COMPANY — **WATERVILLE 48, CONN.**

1849 — *1949*

A *Century* OF MANUFACTURING OF FASTENING DEVICES FOR INDUSTRY

—and its exquisiteness is protected with <u>permanent</u> PLASKON RESIN GLUE

Why Plaskon? Plaskon Resin Glue assures protection of beautiful design and construction of Henredon Fine Furniture, because the Plaskon glue line is many times stronger than the wood. This eliminates the danger of warping, splitting, cracking, separating and peeling due to imperfect bonding.

Plaskon Resin Glue is moisture-proof...unaffected by climate extremes...resistant to bacteria and fungi. High uniformity...good stability in storage. Non-staining...non-bleeding.

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FIRTHITE TIPPED SAW

INSERTED TYPE FOR **WOOD**

Write for full information.

These saws are especially desirable for use on continuous feed machines where smooth cuts are required, and where hard woods are used.

HUTHER BROS. SAW MFG. CO.

ROCHESTER, NEW YORK, U. S. A.

BADGER *Knives* for Every Purpose

Finest tool steel . . . precision grinding . . . controlled heat treating and tempering . . . make them FIRST Choice of the Woodworking Industry and its Machinery Builders.

CUTTER HEADS BADGER KNIVES

Engineers to the Woodworking Industry

WISCONSIN KNIFE WORKS

BELOIT, WISCONSIN

Wood
You believe it?

Many years ago, the Pacific Gas & Electric Company laid out a baseball park for its employees in a construction enterprise near DeSabla, California, and many a good game was played on this diamond.

Subsequently, however, the field was abandoned, and immediately, Mother Nature placed herself in charge. From the trees of a nearby forest, seeds were blown by the wind to the former baseball field.

What happened thereafter is that the seeds grew into trees. They covered second base, they crowded the home plate. They stole from second to third. They covered the outfield.

Today, that former baseball field is part of the forest holdings of the Diamond Match Company. Not a single tree was planted by man on that baseball park; yet hundreds and hundreds are growing there now.

?

Moreover, the annual volume of new wood created by the trees becomes a larger total each succeeding year and now amounts to more than eleven billion cubic feet annually. This trend of steadily increasing growth totals is the basis upon which it is possible to anticipate that eventually the annual volume of new wood grown may equal the annual volume which is consumed — thereby "balancing the budget" of the forests.

?

Some tree leaves and grassy plans contain considerable amounts of ascorbis acid (vitamin C). Pine needles contain about five times as much vitamin C as is contained in lemons, and the Russians have used an infusion of pine needles as a source of this vitamin.

?

Japanese won't be surprised if a few people drop out of sight these dark nights. People are lifting Nagoya's wooden manhole covers for scarce firewood. The army yanked the old metal ones for scrap during the war.

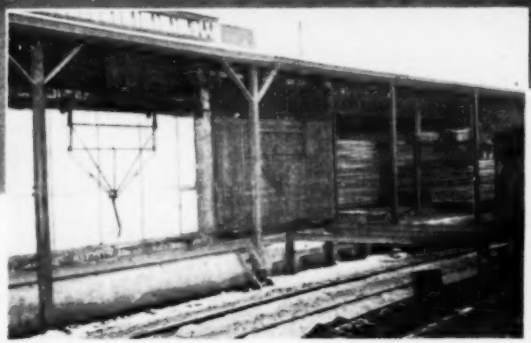
?

Boards are a general purpose item available at all yards in one or more of the kinds of wood most frequently used in building. They are usually of nominal 1-inch thickness dressed two sides to twenty-five thirty-seconds inch thick.

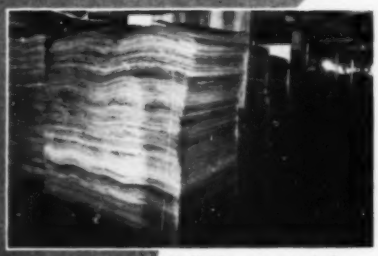
?

The total forestland area in the United States is approximately 630 million acres. This is almost exactly one-third of all the land area in the nation.

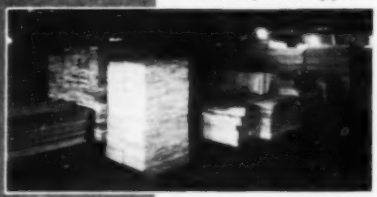
Jamestown Plywood



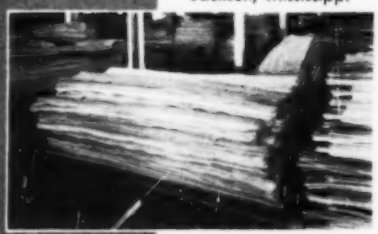
A section of the Battery of Dry Kilns and Dry Storage



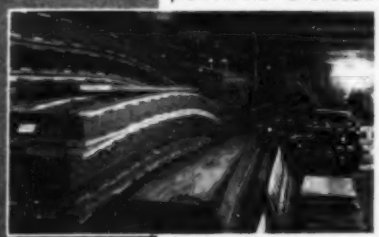
3/16" center stock from our own plant in Jackson, Mississippi



1/24" cross bands from our own plant at Jackson, Mississippi



Adirondack Mountain Birch from our two plants in the Adirondacks



Walnut Veneers carefully selected for grain and Color.

Your Orders

Started Immediately

From Stocks On Our Floors

From our mills in the North and South come these huge stocks of raw materials, ready to process into the plywood that carries the Jamestown trade-mark.

An investment of over two million dollars in the most modern equipment and extensive stocks now enables us to deliver more of the finest plywood that science has yet devised.

Get the facts on Jamestown Plywood—write or phone us.

"A Trifle Higher in Price—
But Much Less Expensive"

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HOT PRESSED RESIN BONDED
PLYWOOD

JAMESTOWN VENEER & PLYWOOD CORP.
Jamestown, New York

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CABINET WORK
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MAINTENANCE
• 24" WIDE
• PLANES 1/16" TO 8" THICK
• FEEDS, 20 TO 60 FT. PER MIN.
• CUTTERHEAD MOTOR, 7½ OR 10 HP
• WEDGE RAISING BED
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• MICRO-FEED SELECTOR
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WHITNEY No. 105
SINGLE SURFACER
Whitney quality construction and wedge raising bed—the only proven type of construction for maintaining accuracy—assures quality planing and low cost maintenance for years to come, long after the average light planer has been relegated to the scrap pile. Investigate Whitney. Write for new 105 Bulletin.

WOOD PRODUCTS

NATIONAL MAGAZINE OF THE WOOD PRODUCTS INDUSTRY

431 S. DEARBORN STREET, CHICAGO 5, ILLINOIS

Vol. 54—No. 3 MARCH, 1949 25c a Copy, $2 a Year

The Postage Rate Increase

Next to an increase in income tax rates, a hike in postage rates will be felt by more firms than any other advance in the cost of doing business. Just why the government, or part of it should suddenly insist that the post office department should be on a profit making basis is hard to see unless it is a part of the over-all program of taxing to the point of exhaustion so that business can be more readily socialized.

Whether you know it or not, you are already paying a high rate for your use of the post office. Low postal rates have been a big factor in helping business to exist and expand and in our view the post office department should be conducted in part at least as a public service. As the biggest printer and publisher in the world, putting out 83,723 different publications last year, Uncle Sam received a big free ride with the post office. Business not only pays the wages of all those who prepared the vast grist of material that the government releases but has to directly make up the loss occasioned by shipping it out.

A few lines to your Congressman, telling him a few of the facts of life about current business conditions and the inadvisability of raising postage rates at this time would be definitely in your own interest.

More Lettuce For Lustron

Fifteen and a half million dollars in 1947, ten million a year later and now seven million more tax payers dollars have been siphoned out of the public treasury via the R.F.C. to help the Lustron pre-fab house company get into and stay in business. Many millions of the taxes the wood products industry pays are going into a project, questionable at best from many angles, which at the same time strains the output of the steel industry. And if the steel industry doesn't speed up its production, the President threatens that the government will go into the steel business.

On Feb. 25, a company executive stated that production had been increased to 25 houses per day. No figures on total production to date are at hand, but from where we sit it sounds like quite expensive housing—at our industry's expense.

1949 Construction To Be High

According to the Bureau of Labor Statistics, 923,500 new permanent non-farm dwelling units were started in 1948, of which 473,000 were started during the first half of the year, 257,000 in the third quarter, and 193,000 in the fourth quarter. Starts in the fourth quarter were 25 percent less than in the previous quarter, and 17 percent less than in the fourth quarter of 1947. In addition to the above, building of houses on farms were very active during the year. It is estimated that, including farm houses, reconversion, and trailers, more than 1,200,000 housing units were built in 1948.

Housing construction in 1949 is not expected to equal the near record volume of 1948 but other construction is expected to increase. A joint release by the Department of Commerce and the Department of Labor states that physical volume of total new construction in 1949 is expected to be substantially the same as in 1948.

Lumber Use 90% of Last Year

Effective January 1, 1949, all softwood lumber with the exception of Port Orford cedar, was taken off the Positive List. Exports of American lumber, including ties and box shooks, in 1948 totaled 646 million feet, as compared with 1,359 million feet in 1947 and 650 million feet in 1946. Exports of lumber to Europe in 1948 were 35 percent of the 1947 volume. Imports of lumber in 1948 totaled 1,880 million feet as compared with 1,315 million feet in 1947 and 1,239 million feet in 1946.

Estimated national lumber consumption, including exports, during the fourth quarter of 1948 was 8,507 million board feet, 87.9 percent of the third quarter of 1948, and 96.2 percent of the fourth quarter of 1947. Anticipated lumber consumption in the first quarter of 1949 is 7,496 million feet, 91.1 percent of the first quarter of 1948.

Price Control Demands Slowed?

With the new Congress in session, the trend of prices will be watched closely for the bearing the trend may have upon the issue of price control.

The moderate decline in prices the last four months, particularly food prices, obviously weakens the movement for the "stand-by" powers the President seeks.

A continuation of this decline, as some economists expect, would further undermine the argument for price control.

Moreover, the turn in prices seems likely to take some of the steam out of the drive for a fourth round of wage increases.

Nevertheless, caution will be in order in judging the long-range trend of prices until the outlook for Federal spending clears.

THE LOG YARD AND EQUIPMENT FOR HANDLING

CONVEYOR TO DRAG SAW

LOG PEELING DECK IN TANK ROOM

From Birds Eye To World Wide

By **Ted Bentz**

Examine carefully a tennis racket, a golf head, or an orange crate—and countless other things. Unless you are familiar with what it takes to manufacture them, you'd hardly realize that some part of them are made of veneer.

Take a look at an electric motor. You'd probably wager your last bottom dollar that it doesn't contain a bit of wood veneer. But it not unlikely does. Before 1932 armature slot wedges for electric motors were made from lumber.

One of the pioneers in the field of veneer manufacture and development, whose president, Juel Lee, is largely responsible for the increased use of wood veneers in American and foreign industry, is the Birds Eye Veneer Company of Escanaba, Michigan.

It was the Birds Eye Veneer Company that converted the armature slot wedge industry to veneer. Lee and his associates showed the industry it was more practical for them to get straight grain wood in veneer. The slot wedge makers recognized this improvement and, today, practically all wedges are made from veneer outside of a small percentage of large, thick wedges which are made from $\frac{3}{8}$" and $\frac{1}{2}$" lumber.

Veneer Usage Now World Wide

More than thirty years ago, when the firm was first established, birds-eye maple veneer was primarily used for expensive furniture, plain veneer for door panels. Since that time wood veneer uses have branched out into hundreds of new fields. And now the products of the Birds Eye Veneer Company are used throughout the world.

Wood veneer is used in ships, boats, planes, trains, automobiles, furniture, musical instruments, and for the manufacture of many other products.

Uses of Birds Eye-made veneer may vary from wallpaper paneling to juke-boxes. The extensive range of uses of veneer reflects the increased use of different woods processed at the company's Escanaba plant. Originally maple, birch, oak and basswood were the standard of the Birds Eye company's products. Now, with increased impetus, the list has been lengthened to include white pine, knotty Idaho pine, poplar, elm, balm of gilead, ash, cottonwood and sycamore.

Lumbermen once scorned the lowly elm. Now it

Left, top to bottom: 1—Birds Eye Veneer Co. log yard and handling equipment. 2—Logs transferred from conveyor to drag saw. 3—Sawing logs to lengths required for special orders. 4—Log peeling deck in the tank room.

PRODUCTION CONVERSION

supplies a big part of furniture veneer. The quarter-sliced logs of elm provide a veneer with an attractive pencil-stripe grain that matches beautifully. When rotary cut the veneer brings out a feathery grain like fir.

The model airplane building hobby has provided an ever-increasing outlet for basswood veneer. Cut in sheets, usually one-twentieth of an inch in thickness, basswood veneer made at the Escanaba factory is used by toymakers throughout the world. Toy manufacturers slice it up into strips and cut it to size for model airplane hobbyists.

A sizeable amount of the Birds Eye mill's veneer production goes to manufacturers of musical instruments, pianos, juke-boxes and radio cabinets.

During World War II, particularly, tremendous volumes of wood veneer were manufactured for use in making airplane wings and parts, propellors, bomber loading ramps, hospital stretcher handles, P.T. boats, assault boats, and even military housing.

The Birds Eye Veneer Company, appropriately, acquired its name from peculiar maple timber of dotted grain design now commonly known as birds-eye. It was not long before the Birds Eeye company became famous as the world's largest producer of bird's-eye maple veneer.

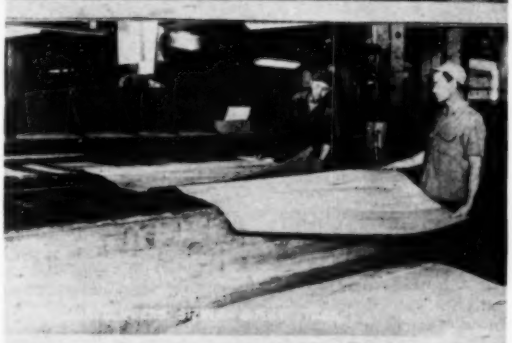
Birds Eye Maple Timber Limited

At one time, birds-eye maple timber was plentiful in the northern Michigan wooded sectors. Today the supply is limited. But the demand for birds-eye maple, like that of curly maple and curly birch, is high. Thus, whenever birds-eye grain shows up in routine shipments of maple to the plant, the Escanaba mill cuts birds-eye in a striving effort to supply the demand.

The company's veneer equipment is extensive, consisting of five huge rotary lathes, one slicer and two segment saws. Five modern mechanical dryers are used. The firm produces three types of veneer —sliced, sawn and rotary cut.

In the production of sliced veneer, peeled quarter-sawed logs are sliced in thin sheets lengthwise as the log moves in a parallel direction down on a long, sharp knife. The sheets may be cut as thin as one-hundredth of an inch in thickness, to as much as above five-sixteenths of an inch, depending on the specifications of the order going through the mill at the time. Sheets of one-eighty-fifth of an inch and thinner are cut primarily for production of veneer for wall covering. It is an expensive item, providing an attractive decorative motif, and is used primarily for show windows, fancy installations which require

(*Continued on next page*)



Right, top to bottom: 1—110-inch Coe Lathe in operation with flow of veneers going to the double deck clipper. 2—Dimension Clippers sizing sheet stock. 3—Merritt Dryad drying pin plank stock. 4—Curly birch flitches.

(*Continued from preceding page*)

considerable curved work.

Sawn veneer is also produced from quarter-sawed logs. As in the conventional sawmill manner it is also cut lengthwise on a fine-tooth circular saw. Heavier veneers are cut with a saw at the Escanaba plant. In rotary cut veneer, the major output of the plant at present, logs turn against sharp knives in the lathes. The log is seemingly unwound in an endless strip of veneer of the desired thickness. Later the material is cut to size by clippers stationed at the ends of conveyors near each cutting lathe.

The logs, before being cut for the rotary machines, are sawed to wanted lengths as they arrive in the mill on a moving chain. Then they are packed in tanks of hot water for processing. Hot water softens the wood fibre for the lathes, hastens peeling. Steamed-logs are carefully hand-peeled by men who watch for old nails and staples that occasionally show up in logs arriving from the farming areas.

Before the logs go to the lathes the bark is removed. Heavy lugs are forced into opposite ends to hold them in place. Turning shafts rotate the log against the knives of the lathe which also cut off strips at the ends of the log to even the length of the lengthy apron of steaming veneer. For slicing, however, the logs are buried in tanks where they are steamed.

All Birds Eye Shipments Are First Dried

All veneer shipped from the Birds Eye mill at Escanaba is dried first in a battery of mechanical dryers which carry the sheets through intense heat and fan-propelled air. For checking the moisture content, special testing devices are used. Orders for wood veneer usually specify the maximum dryness required in the finished material. A crew is steadily employed at the plant to make crates of various sizes. In these sheets of veneer are packed after they are graded, sorted and clipped. The logs arrive at the mill by truck and rail. The finished product is shipped the same way.

In May of 1913 the first apron of wood veneer was produced at the Birds Eye Veneer Company's plant in Escanaba. Since that time the firm has expanded and become one of America's major woodworking industries. In its employ it has many skilled veneer men who have been with them for a long time.

All along, the Birds Eye company has modernized and enlarged its plant whenever the situation justified such action. Further modernization is being contemplated, and just recently the firm replaced old machinery with new.

Throughout the United States the company has a number of trained representatives who are experts in the field. They include Lawrence D. Dooge, Grand Rapids, Mich.; P. Eric Perers, Chicago, Ill.; George Albright, Jamestown, New York; Albert Constantine, Jr., New York City; Roy Armstrong, High Point, North Carolina; Chester B. Stem, New Albany, Indiana; Otis Fine, Los Angeles and Fred Lundgaard, Tacoma, Washington.

Mr. Juel Lee, whose record in the veneer manufacturing industry is most outstanding, is president and general manager of the company. He says the secret—if you care to call it that—behind the company's success is "just a lot of hard work."

Veneer Manufacturing Is a Fascinating Business

Practically every log opens up a little different. "You can develop an intensive interest and real enjoyment out of what you are doing in the veneer industry," Mr. Lee says with plenty of satisfaction. "It gets into your blood." As a matter of fact, it gets into the blood of practically everyone connected with its manufacture. "And when you get a crew of men together, all interested in what they are doing coupled with harmony throughout the organization, nothing can stop you from going ahead," Mr. Lee points out.

The vice president of the company is Burton R. Tuxford, who resides in Drexel, North Carolina, and who is also vice president and sales manager of the Drexel Furniture Company. Tuxford's ability in business and sales promotion has been demonstrated by his untiring effort to keep the wheels of success turning.

W. P. Schuldes, secretary of the company, with Mr. Lee, is actively engaged in the manufacturing end of the business. Schuldes plays an important role in the manufacturing and selling of wood veneer and his duties are many.

There is much more that could be appropriately said to the credit of the Birds Eye Veneer Company. The important factor, however, is that wood veneer uses in the field of American and foreign industry has made the world a better place to live in.

Northern Hemlock and Hardwood Men Elect Officers, Discuss Problems

About 125 members and guests of the Northern Hemlock and Hardwood Manufacturers Association met at Land o' Lakes, Wisconsin on February 8th to elect officers, discuss the current business situation, and to consider matters of general interest to lumber, veneers, plywood, and flooring industries of the region.

Arvey Ahonen, president, cautioned members that we were approaching a new era of business and that the Association was of even more importance now than during the critical war years.

O. T. Swan, secretary, reviewed the implications of present business with respect to national affairs, emphasizing the point that there was very little opportunity for cost recession. He said that Wisconsin and Michigan lumber was largely sold on a short freight rate and that an attractive local market for lumber existed right here at home.

Kurt Stoehr, Bay de Noquet Company, Chicago, said there was increasing hesitancy on the part of lumber purchasers to build up inventory at this time. This opinion was seconded by A. R. Copeland. Harvey Newell said the better grades of pine and hardwoods were in good demand. Juel Lee, Birds Eye Veneer Company, told of an unsatisfied demand for high quality and long length veneers, but the market on the lower grades and shorts was disappointing. The blond trend in furniture is still being maintained which makes both birch and maple popular.

George Vehlow, for the nominating committee, presented the following nominations, all of whom were elected: President, Arvey Ahonen, Ironwood; Vice President, A. E. Swanke, Tigerton; Treasurer, W. W. Gamble, White Lake; Secretary-Manager, O. T. Swan; Directors: Robert Lyons, Wm. Bonifas Lumber Co.; A. L. McBean, Edward Hines Lumber Co.; Kurt Stoehr, Bay de Noquet Co.; P. C. Christiansen, C. M. Christiansen Co.; Swande Godell, Chassel Lumber Co.; F. H. Himes, F. H. Himes Lumber Co.; J. Hobelsberger, Roddis Plywood Corp.; A. R. Copeland, Copeland Lumber Co.; Fred Menzner, Menzner Lumber and Supply Co.; Ray Aldridge, Ray Aldridge, Inc.

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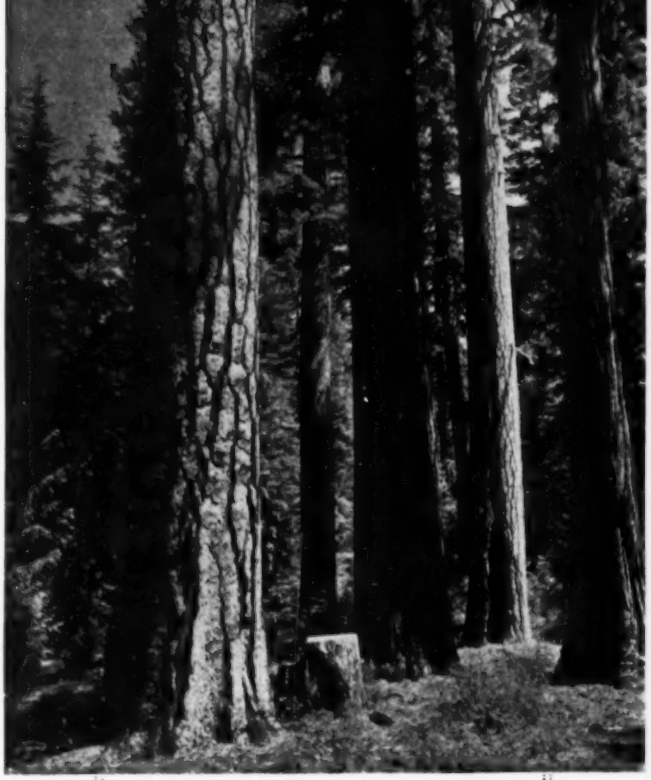
The objectives in planning the harvest of our forest crop are to insure a sustained abundance of forest raw material, and to improve the current and future forest growth of the nation.

The giant timber shown here obviously will not continue to be available unless more owners of timberlands adopt the expanded program of forest management now known as "tree farming."



Utilization of Low Quality SOUTHERN HARDWOODS *and its Effect on Forest Management**

By

Paul M. Garrison, Chief Forester

Gaylord Container Corp., Bogalusa, Louisiana

We as foresters are stll idealists and as such we are inclined to be impatient with the progress being made by ourselves and our associates in this complicated economic world of ours. It is not my intention to present a formal paper loaded with long columns of box car figures as to availability of supply, growth and drain and attempt to make these figures add up to a definite answer; but rather it is my intention to attempt in an informal sort of way to review the hardwood situation in the south as it is known to exist and endeavor to enumerate some of the developments which have taken place within the region in the past few years—developments which, to me at least, indicate a definite trend toward the solution of a large and difficult problem.

The territory of which we speak has been defined many times, it includes all or part of twelve states, namely, Oklahoma, Texas, Arkansas, Louisiana, Mississippi, Tennessee, Alabama, Georgia, Florida, North Carolina, South Carolina and Virginia.

Low Quality Southern Hardwoods is hardwood trees of all sizes that because of poor form or quality will not produce one 12' sawlog and all hardwood trees under sawlog size.

Within the boundary mentioned above there is a total land area of 326,000,000 acres of which 183,000,000 acres are classified as commercial forest lands. These commercial forests are made up of 73,000,000 acres of pine; 30,000,000 acres of mixed pine and hardwood; 40,000,000 acres of Upland hardwoods and 40,000,000 acres of Bottomland hardwoods. It appears to me that our greatest problem concerns the land areas now occupied by stands of mixed pine and hardwood and Upland hardwoods; approximately 70,000,000 acres.

On the above 183,000,000 acres of commercial forest land the United States Forest Service survey of 1945 shows the following:

Total Hardwood, 1,500,000,000 cords. One Billion, Five Hundred Million cords. I do not know how many of you realize how much wood that is. Well it reminds me of a true story told on two illustrious members of our profession, Capt. Eldredge and Jim Gerard. I don't know who asked the question or who answered, but either is eminently qualified to do so. Cap said: "Jim! How much wood is one billion, five hundred million cords?" Jim took an old envelope from his pocket and figured and minute and said, "Well, I'll tell you Cap, if that wood was cut into 4' billets and laid end to end and side by side, it would completely pave the entire state of Texas and with enough left over to stoke Hell for seven year."

Total Hardwood, 1,500,000,000 cords.

Cull Hardwood, 300,000,000 cords.

*(a) Sound Cull, 200,000,000 cords.

**(1) Non pulping, 125,000,000 cords—50′ 5-13″.

(2) Pulping, 75,000,000 cords.

(b) Rotten Cull, 100,000,000 cords.

We can now discard from consideration ⅓ of our total cull volume which is the 100,000,000 cords of rotten cull, and deal only with the remaining ⅔ which is 200,000,000 cords of sound cull material.

Let us think of growth:

Hardwood growth on all hardwood except rotten cull is as follows:

Current annual, 50,000,000 cords.

Second Cull, 6,000,000 cords.

Non Pulping, 3,750,000 cords.

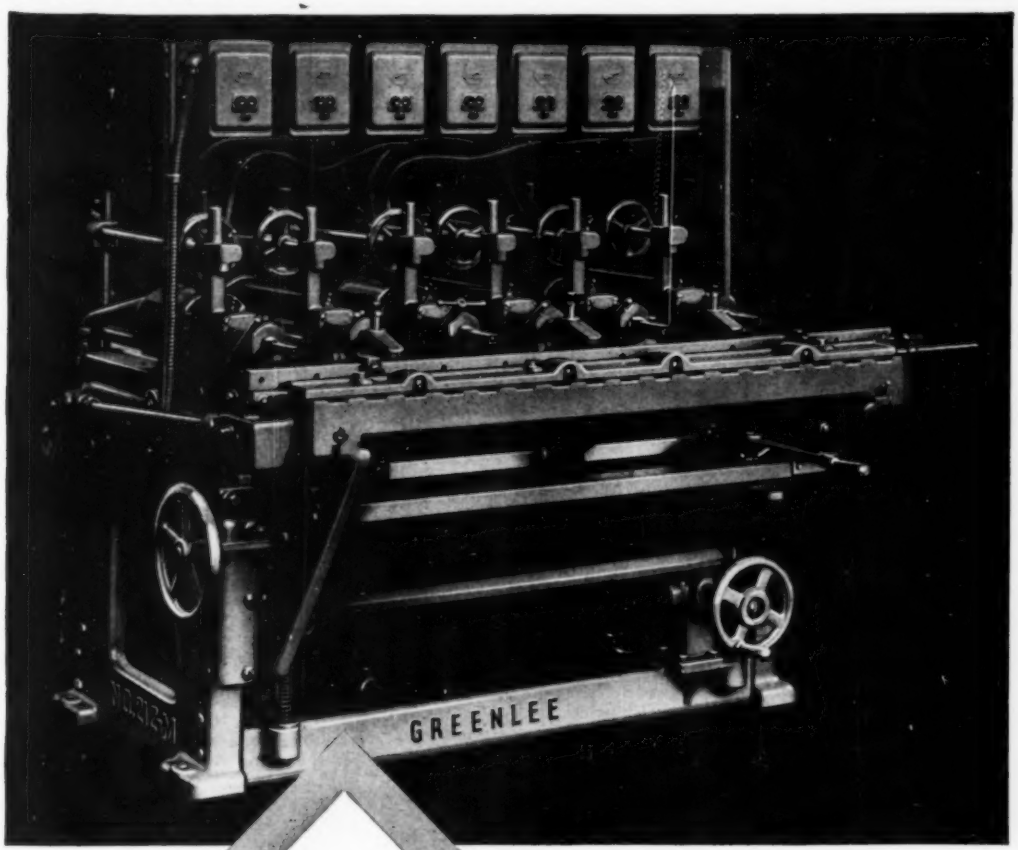
Pulping, 2,250,000 cords.

We are now concerned with a land area of 70,000,000 areas; 200,000,000 cords of growing stock on which we have an annual growth of 6,000,000 cords. I wonder if you are now approaching the same state of confusion that I have been in since September in regard to this problem. If you are I know another good story. I think it applies in this case, as we are perhaps all confused about the problem and where we are going. A tourist stopped a man on the street of a small city one morning and asked, "Friend, can you tell me how to get to the post office?" The man said, "Sure, you go straight up this street two blocks, turn right, go one block, turn left, go—no you can't go that way. Go up this street three blocks turn right, go one block, turn left, go—no you can't go that way. Tell you what you do, go up this street one block, turn right, go one block, turn left, go—nope, you know I'll be damned if you can go to the post office from here!"

Where Are We Going?

In all seriousness—where are we going? It's a problem that confronts all foresters regardless of the region in which they work. It's a problem that becomes more

*Presented at the national meeting of American Foresters, Boston, Mass., December 16-18, 1948.



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critical as time goes on and we practice what we think is good management on forests of valuable species, and as these supplies of valuable species become more sought after.

I think that in as far as the south is concerned some progress has been made. Not necessarily in a large material sort of way but in realizing that the problem exists and that something must be done about it. Connected as I am with a pine consuming industry the hardwood problem was never prominent in our minds but as our management practices become more refined our hardwood problem becomes paramount. In the pat few years we have come to realize that we do have a considerable area of hardwood lands and as such we expect to manage it just as carefully for production of hardwood of usable species and quality of product as we do our pine lands for the production of usable materials as to quality and size.

The booming World War II market for forest products as well as the post war demand has educated others as well as foresters in the uitilization of hardwoods of all species.

There is a continual stream of operators through my office inquiring into the possibility of purchasing not pine stumpage but hardwood stumpage of almost any species in almost any quantiities. These same operators a few short years ago were interested exclusively in pine. This hardwood in considerable quantities is going into cross ties for export to Greece, Holland and Belgium, oil field decking, shuttle blocks, flooring, mine props, fuel wood, furniture, staves and heading, and pulpwood. And these products are being produced from hardwood trees which we have always considered sound culls. To indicate this trend to you I wish to quote from our own experience.

(1) I am told that the last quantity of white oak staves which moved from our immediate territory was from 1909-1915. In 1944 we were approached by three distilling companies to purchase white oak for staves and there have been produced from our lands to date 2,030,241 board feet white oak logs for staves at $25.00 per M. These staves were produced from Post and Cow Oak, not from forked leafed white oak.

(2) Within my memory we have never had an inquiry for purchase of oak tie stumpage because the quality of our oak was so low—sound cull again. In 1944 our entire holdings was examined by one of the largest tie producers in the country and the stumpage was refused at any price. Since that time we have sold 4,428,313 board feet at an average price of $9.00 per M.

(3) In 1941 we acquired a 6,000 acre tract which included 2,800 acres of bottom land hardwoods. This tract was originally cut over in 1935, recut 1941, and in 1945 we sold $16,000.00 worth of cull hardwoods for slack cooperage and heading and at the present time we are cutting oak pulpwood from the area.

(4) We have discontinued our tie operations bceause our lumber operators desire to purchase the cull oak that is presently going into export ties.

(5) We are at the present time cutting and using 1,500 cords of oak pulpwood per month and hope to expand this to 5,000 cords per month.

(6) Many operators in the south have seriously undertaken the elimination of worthless hardwood from pine stands or potential pine stands by the use of tree poison. This operation can be done economically and satisfactorily and will in the next few years be done on a rather extensive scale.

That satisfactory pulp can be made from most species of southern hardwood is an established fact and further it is recognized that the addition of some hardwood pulp to pine pulp adds desirable qualities to the higher grades of paper insofar as bulk, opacity and formation are concerned and the same qualities of bulk and formation to the heavier boards. Mixtures of pine and hardwood pulps are being used by at least three southern mills today. At least three other southern mills are using quantities of ground hardwood pulp. Several other southern mills are using from 5—10% of hardwood pulpwood in their normal sulphate operation. One mill uses up to 20% hardwood in their normal operation. One mill is using pure oak in the manufacturing of semi-kraft pulp.

Cite One Significant Development

Perhaps the most significant development in the past two years has been the conversion of one complete mill and the installation of equipment in a second mill for the manufacture of pulp using entirely hardwoods by the so-called neutral sulphite process of cooking. These two mills use approximately 250,000 cords of hardwood annually.

In recent weeks International Paper Company has announced a 300 ton rayon mill, using hardwoods as raw material, to be erected in the south and be in operation in 1950.

Research at the University of Florida points toward the possibility of the manufacture of rough board in connection with a tannin plant using pulpwood.

Extensive research is being conducted at New York State College of Forestry, the University of Maine at the Institute of Paper Chemistry, and at the Forest Products Laboratory in the utilization for hardwood for special pulp.

There are many in the business who believe that as the southern pulp and paper industry evolves into the production of the higher grades of paper and board there will be a greater and greater demand for the hardwood material which we have always considered sound cull. And this added demand by this one industry will go a long way toward creating the demand which will make the harvesting of these hardwoods economically feasible. True words were spoken by A. G. T. Moore of Southern Pine Association when he said "The most effective way to encourage the growing of trees is to develop profitable reasons for cutting them down."

The irrevocable old law of supply and demand will boost us on our way, and the inherent ingenuity of the American people in the development of new and the improvement of the old processes and techniques, for the utilization of this so-called cull material will ultmately solve some of our problems and we, like the tourist going to the post office, may be badly confused, but we will, as he did, take a new starting point and finally arrive at our destination.

**Trees culled because of poor form and quality.*

***Oak, Pecan, Ash, Hickory, Hackberry and Elm.*

Rotten Culls—Any sawlog size tree 50% defective. Any small tree 50% defective.

Sources of Data:

Reappraisal Report No. 1, U.S.D.A. F.S.—1946.

Land Areas—Table 16.

Cubic Foot Volume—Table 19.

Growth—Table 23.

You *NEVER* See a *HAPPY* Communist

Communism is a sour "ism" based on envy and hatred of successful people.

If communists spent less time in hating and more in "humping", as genuine Americans do, they would *have* the things they envy. And then they'd be happy. But they wouldn't be communists.

A medium-sized machine built for accurate ripping, cross cutting and dadoing

The "Oliver" No. 270 Tilting Arbor Variety Saw Bench is Compact

does smooth, accurate work without the use of a rule, for the gauges and table are so accurately graduated. Has the new Automatic Saw Guard with Anti-Kick Back Catch and adjustment for tilting saws assuring maximum safety. Saw tilts up to 45°. Takes saws up to 15" diameter. With plain double faced ripping fence it will rip stock up to 16" wide on left side, and up to 28" wide on right side. With Type "J" fence, with micrometer adjustments, it will rip stock up to 26" wide on right side and 17½" wide on left. Cross cuts up to 16" wide and 3" thick. Precision construction, heavy rigid base, ball bearings assure smooth operation for many years.

Write for Bulletin No. 270.

OLIVER MACHINERY CO.
Grand Rapids 2, Mich.

New Type Hot Press Glues Up FACE VENEER CROSS BANDING *and Core in One Operation*

V. Berthelsen

The Berthelsen Engineering Works, Inc., of Joliet, Ill., has just perfected and are now placing on the market for the first time a single opening hot press that makes a complete veneered panel in one operation. It glues the face veneers, cross banding and core stock simultaneously in from one to two and a half minutes, depending on the thickness of the veneer and panel, and in a wide range of panel dimensions.

The presses are fully automatic and are push button operated. As the steam heated platens, hydraulically operated come together, air operated side pressure bars of which there are six in number, exert a horizontal pressure which presses the glued or unglued pieces of the core stock together and holds them in a firm and rigid position, and immediately thereafter the horizontal pressure is applied which glues up the cross banding and face veneer.

In more detail, the operations are as follows: After building up the load of glued veneer, cross band and core stock, the load is pushed into the press and the starting lever pushed.

This causes the press to start closing. However, before reaching top position while the core is still loose, it stops momentarily, permitting the side pressure to be applied. The platen moves upward again and the vertical hydraulic pressure is applied. When proper pressure is attained the motor stops and the automatic timer starts. After a predetermined curing time of one to two minutes the timer throws a switch causing the side pressure to be released.

The hydraulic pressure is released and the platen is lowered to a pre-adjusted stop. A new load, built up while the press is working is pushed in, thereby pushing out the finished panel which is stacked in a pile for equalizing.

Mr. Berthelsen, inventor of the press, was engaged in furniture manufacturing in Denmark for a number of years and the development of his new press came about through the need of a smaller hot press that would serve a great number of firms that could not justify the use of a multi-opening hot press. Many of his first presses are in use in Denmark and other European countries, and their sale is growing rapidly in this country. Mr. Berthelsen makes much of the lumber saving technic which his machine provides. He advocates the use of thinner lumber for core stock which is possible when the edge-gluing is performed in his press, because the core stock here is planed in loose board prior to the gluing operation. This is a big item in Europe where lumber is at a premium and must be used as sparingly as possible. Obviously the press can be used for many other gluing operations such as making doors, frames, gluing on plastic table tops, etc.

As to the gluing of the core stock, the inventor has proved to his own satisfaction that it is not necessary to apply glue to the sides of the core stock pieces unless the exposed ends are to be shaped or molded. If the latter is the case, he advocates applying glue only on the ends of the core stock pieces for a distance of four to six inches, claiming that the cross banding and face veneers hold the core sufficiently for most purposes and at the same time lessen the likelihood of the completed panels' warping, but he recommends a cross band not thinner than 1/12". He also impresses the necessity of the use of the cold setting resin adhesives in his hot press. This glue in reality being an extremely rapid hot setting adhesive and therefore by using this a very fast cure is made possible in the "VB" press, which being single opening has a production cycle sufficiently fast in loading and closing to prevent pre-cure.

Further information on the construction and application of series 20 presses may be secured by writing the Berthelsen Engineering Works, Box 1423, Joliet, Illinois.

Florida Forest Fire Loss Hits Low Mark

Tallahassee, Fla.—Only one and one-half acres of every 1000 under organized forest fire protection in Florida burned in the last six months of 1948, a new low fire loss record, according to the Florida Forest Service.

Reporting on the fire record for the first half of the 1948-49 fiscal year, Owen R. Douglass, state forest service fire control chief, said that only 0.154 per cent, or 11.703 acres of the 7,556,494 acres under organized protection were burned during the period.

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MODEL M RIP SAW

● Here is the rip saw to do the job you want it to do in your plant—year in and year out—a newly-designed, performance-proven, straight line, chain feed, glue joint rip saw of the under-cutting type. The MARION MODEL M rips stock 25½" wide to the right of the saw, any width to the left, any thickness up to 4". Rips through 2" stock with a 12" saw blade. It has eight rates of feed in two ranges of four speeds each, all quickly available, and operates smoothly and quietly at any speed. Standard speed range is from 56 to 212 feet per minute. Many new and exclusive features insure the production of precision glue joints.

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● *Fully guarded, interchangeable feed chains and chain ways of new, wear-resistant iron alloy. Automatic lubrication from large capacity oil reservoir.*
● *A new saw dressing and jointing device makes saw blades cut smooth, yet maintains their keen cutting edges!*
● *The all-steel frame is heavy, rigid and practically indestructible. No sawdust accumulation inside!*
● *Rear table plate swings back and downward, preventing jamming. Kick-back fingers adjust automatically, guard thicker stock. Machine can not be started while operator is changing saw blades.*

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MARION MACHINE, FOUNDRY and SUPPLY COMPANY
DEPT. WP MARION, INDIANA, U. S. A.

Foreign Woods

Origin, Use, Properties and Nomenclature

By **George N. Lamb**

GREENHEART—
Ocotea rodiaei Lauraceae
(Laurel) Family

This is a large tropic and sub-tropic family and contains many timbers suitable for industrial purposes. The family also includes trees that produces camphor, cinnamon and the avacado. The genus Ocotsa is found in tropical America and Africa. A sister species of Greenheart is the Stinkwood of South Africa, so highly prized as a cabinet wood that there is a hundred year ban on cutting it.

Greenheart grows principally in British Guiana at a height of over 100 feet and a diameter of over 4 feet. This wood has been known and used for a long time and used in the English timber trade since 1769 but has not been extensively used in the United States.

Greenheart is noted for its strength and durability. Its principal use is in Marine construction, especially for piling piers, planking, sluice gates and locks and heavy timbers in ship building. It is also used for fishing rods but should not be confused with Surinam, Greenheart or Bethabara (which is Tabebuia sp.). Greenheart is unsurpassed by any other wood in its resistance to marine borers (teredo) in salt water but not to borers in fresh or brackish water in the tropics. It is not attacked in temperate zones. The heartwood varies from lustrous light to dark olive or blackish, often with streaks of light and dark areas. It is very heavy, hard and strong.

Sp. gr. 105 to 1.23

OTHER NAMES:

British Guiana—Determa
Surinam—Tetroema, wana wane
French Guiana—Grignon
England—Demerara

OTHER WOODS CALLED GREENHEART:

Columbrina ferruginosa—Puerto Rico and Jamaica
Zizyphus chloroxylon—Jamaica

CARACOLI—
Bucida bucerus Combretaceae
Family

This family is pan-tropical and indicates the genus Terminalia which produces East Indian Laurel and Limba, the latter more recently sold in this country under the name of "Korina." It also includes the Nargusta of British Honduras.

The genus Bucida usually is only a small tree, although under favorable conditions, may reach a height of 80 feet and a diameter of 3 feet. It occurs in the West Indies on the shores of the Caribbean and Bay of Panama. Its import since war into this country was reported from Santo Domingo. Locally the wood is used for poles, posts, crossties and piling because of its resistance to decay.

The heartwood is dark yellowish brown, sometimes with an olive tinge. The sapwood is yellowish, luster medium to high, moderately to very heavy, hard and strong. Wood sometimes figured, somewhat difficult to work but finishing smoothly. Has been used for carpentery and furniture but not likely to be an import of any consequence.

OTHER NAMES:

Florida—Black Olive Tree
Jamaica—Black Olive
Bahamas—Shiny Black Olive
Cuba—Jucaro Espinosta
Santo Domingo—Caracoli
British Honduras—Bullet Tree

MASSARANDUBA—
Mimusops Huberi Sapotaceae
(Sapota) Family

The Sapota family is a large one of pan-tropical distribution. The trees generally produce a milky datex, sometimes valuable, such as chicle and balata. This family is also much confused botanically.

Massaranduba occurs in the lower Amazon valley in Brazil and this tree is valued for its timber rather than its latax. This wood has been imported into the United States in small quantities for years but has never become important. It has been tried out as a substitute for oak, maple and hickory with indifferent results.

The trees are large and the wood is heavy, hard and strong and has been used in Brazil for crossties and for heavy out-door construction. The heart-wood is red or reddish brown, deepening with exposure. The whitish sapwood is not sharply demarked from the heartwood. The wood is fairly easy to work, considering its hardness but finishes smoothly. Specific gravity 0.90 to 12.0.

Sawdust is irritating and lumber must be handled carefully to avoid splinters. If available in quantity this wood has import possibilities and selected trees might have face veneer possibilities.

OTHER NAMES:

Trade Names—Beef wood, Bullet wood, Red Lance wood
Florida—Wild Dilly, Wild Sapodilla
Jamaica—Sapodilla, Bullet wood
Cuba—Acana, Balata
Puerto Rico—Bullet tree, Bully tree
Santo Domingo—Balata
Costa Rica, Panama, Colombia and *Venezuela*—Nispero
British Guiana—Beefwood
Surinam—Bad Bolletrie

Western Pine Association Elects Officers

San Francisco—E. C. Olson of the E. C. Olson Lumber Company of Spokane, Wash., was elected president of the Western Pine Association at the conclusion of the group's annual meeting here.

Olson is also head of Kaniksu Forest Products, Inc., Priest River, Idaho. He succeeds Homer B. Jamison, head of the Byles-Jamison Lumber Company, Fresno, Calif., president of the association for the past two years.

Named vice presidents were U. R. Armstrong, Halack and Howard Lumber Company, Cascade, Idaho, and M. R. Prestridge, president of the M. R. Prestridge Lumber Company, Alamogordo, N.M. W. H. Myers, general manager of the Shevlin-Hixon Lumber Company, Bend, Ore., was elected treasurer.

Directors at large are O. H. Leuschel, general manager, Potlatch Forest Industries, Inc., Lewiston, Idaho, and J. P. Hennesay of the McCloud River Lumber Company, McCloud, Calif.

Elected directors of the National Lumber Manufacturers association were Swift Berry, Michigan-California Lumber Company, Camino, Calif.; J. M. Brown, Northwest Timber Company, Gibbs, Idaho; J. F. Coleman, Kinzua Pine Mills, Kinzua, Ore.; A. J. Stange, Mt. Emily Lumber Company, La-Grande, Ore., and Jamison.

Berry was elected to the NLMA executive committee and Brown as American Forest Products Industries, Inc., trustee.

Says "Regimented Welfare State" Aim of Government; Warns On Senate Bill 712

San Francisco, Calif.—The lumber industry has been made one of the first targets of the administration in a battle to impose the will of a "regimented welfare state" upon the nation, members of the Western Pine Association were told today.

The speaker was Richard A. Colgan, Jr., Washington, D.C., executive vice president of the National Lumber Manufacturers Association. Addressing the final day's session of the annual Western Pine meetings in the Palace hotel here, he declared the danger lies in proposals before the 81st Congress calling for extension of the public housing program and government control of private forest lands.

Colgan criticized Senate Bill 712 proposing additional funds for Title I and Title II of the Federal Housing Act and an increased revolving fund for the Reconstruction Finance Corporation to purchase mortgages. He reported that the public housing bill calls for 1,000,000 public housing units compared with 500,000 listed last year in the Taft-Ellender-Wagner measure.

"If passed, this proposed legislation will, for all practical purposes, establish a permanent agency of gargantuan size, with Congress having little or no control over its activities," he charged.

Concerning control of forests, the national executive pointed first to President Truman's economic report and then to recommendations of the U. S. Forest Service. The Forest Service contention that control of individual woodlots is necessary to prevent forest depletion was branded as untrue.

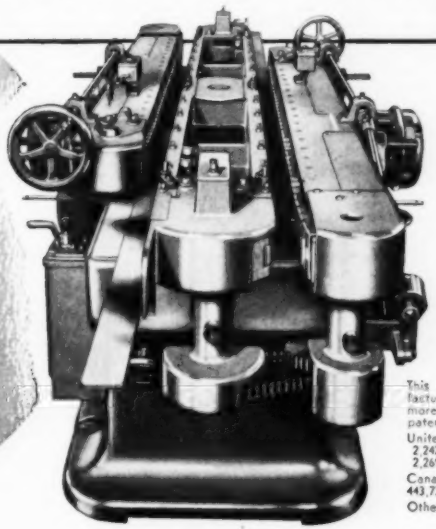
"The Forest Service," he contended, "is another bureaucratic Government bureau seeking more power and larger appropriations."

Moe: "You only make $30 a week and your support eight children? How do you manage?"

Joe: "Easy. There are 500 people working at the factory with me and every week I raffle off my wages for four bits a chance."

CUT CLEAN, STRAIGHT, PERFECT GLUE JOINTS ON MIXED WIDTHS OF VENEER STRIPS WITH THE . . .

G. M. DIEHL NO. 69 VENEER JOINTER and EDGE GLUER



This machine is manufactured under one or more of the following patents:
United States:
2,242,179 2,305,525
2,269,816 2,372,894
Canadian (1947):
443,733 443,734 443,735
Other patents applied for.

Fast, Accurate, Economical Large volume production of veneer jointing and edge gluing on mixed widths of veneer strips is an outstanding feature of the Diehl "69" . . . all joints are clean, sharp, and straight—permitting a perfect splice and highest quality workmanship.

The "69" operates with precision accuracy at speeds up to 50 feet per minute, jointing mixed widths of veneer strips in bundles up to 2 inches thick. Also deposits uniform application of resin or animal glue on edges if desired in same operation. (Joints solid stock also with or without glue application.)

Volume producers of plywoods and veneers find the "69" a fast, economical machine for handling their jointing operations . . . production is increased, costs are greatly reduced and workmanship is of the finest. Write for illustrated literature, specifications and further details.

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WABASH INDIANA, U.S.A.

ALSO CUTTERS, CUTTER HEADS, CUTTER GRINDERS, SAW SETS, GLUE POTS.

The 660 Glue Jointer and Edge Moulder . . . a dual operation machine that produces the highest quality workmanship at either operation. Only a few minutes are required to change from one to the other. Performance is simple, fast and extremely accurate.

The 724-A Straight Line Cut-Off Saw . . . one of the finest, most modern ram type, straight line cut-off saws on the market. Compact, sturdily built for continuous use on the production lines of furniture, millwork and other woodworking plants. Automatic or hand-operated models.

The 75 Rip Saw . . . unsurpassed for high speed rough sawing or precision accuracy in cutting straight or hollow glue-joints. Operates up to 250 ft. per minute, handling material from 1/8 to 4/4 inches thick and any length from 6 inches up. Quiet, vibration-free, economical and convenient to operate.

The 890 Veneer Splicer . . . the latest, most modern method of edge joining veneers. Applies resin glue to edges of veneer strips, joins them together under heat and pressure, to a tight invisible splice. Operates at high speed—up to 85 feet per minute . . . a big labor saver . . . increases production and workmanship.

WHERE PRECISION CRAFTSMANSHIP IS HONORED

Twenty Profit Savers in LUBRICANT HANDLING

By

Ernest W. Fair

1. Where quantities of lubricants are used a central oil storage house, set apart from the main plant, is always best.

2. Avoid storage on wood floors for woodwork soaks up oil and grease from handling and becomes a fire hazard.

3. If possible have doors and windows of steel frame or roller type and fitted with wire glass and automatic closing devices.

4. Have lubricant storage facilities close at hand in order to reduce transportation time involved.

5. Where lubricants are stored in barrels or drums it is always best to have hoisting equipment handy.

6. Good temperature control in storage enables all types of lubricants to be handled much more efficiently. Wide temperature fluctuations mean sweating and condensation of moisture in containers.

7. Pumps, meters and other measuring devices will quickly save their cost over hand handling and use where even moderate quantities are involved.

8. Keep oil drums on end and always check storage to see that no water can get into opened drums.

9. Make certain bungs and seals on drums are always kept tight to avoid moisture and other contamination as well as drippings.

10. Have drum seal and bung wrenches at hand in storage in order to always be certain that seals are tight.

11. Store only a slight excess of the amount needed. Lubricants are always better when fresh. Large stocks invite contamination and waste in use.

12. Keep monthly lubrication records for better and more accurate control not only in storage but also in use.

13. Always have suitable containers at hand to catch all oil drip.

14. Have reliable fire protection equipment close at hand near all storage and make sure this equipment is tested regularly and often.

15. Have a regular clean-up routine of all storage facilities as well as on machinery and equipment, particularly following a regular lubrication job.

16. Collect and keep all oil soaked clothes in covered metal containers and have them washed before they are used again.

17. Have sand at hand in sand boxes for fire protection but keep these away from oil containers for sand is a damaging abrasive when suspended in lubricants of any kind.

18. Get tough when someone permits spilled or dripped oils to accumulate anywhere . . . that generally means trouble of one kind or another.

19. Have it a hard and fast rule that all spilled oils or other lubricants are wiped up immediately for they are not only a fire hazard but are easy for someone to slip upon with resultant personal injury.

20. Avoid the use of lint-shedding rags for wiper cloths. Lint, when lodged in bearings or oil circulation medium, will clog and cause damage.

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Rotary Cut Bay Poplar and Gum
VENEER
Because the nearby timberlands supplying the Bacon-McMillan plant are owned by Bacon-McMillan, promised delivery dates can always be met.
Bacon-McMillan Veneer is cut from tall, straight, limbless Bay Poplar and Gum. The result is a flat, straight grained veneer of uniform thickness.
BACON-McMILLAN MANUFACTURING CO.
STOCKTON, ALABAMA

Resin Glues Pace Wood Products Development Wadsworth Tells Conference

Barton Wadsworth

Modern synthetic resin adhesives, which have revolutionized production techniques in the woodworking industry in the past decade, now promise even greater production economies, B. B. Wadsworth, sales manager of the Borden Company's Chemical Division, told the Southwest Wood Conference held recently in Lufkin, Texas.

Until 1937, the woodworking industry depended heavily on older conventional glues of "natural" origin, such as the caseins whose manufacture was pioneered in the early 1900's by the Casein Company of America, now known as Borden's Chemical Division. Borden scored another "first" in 1937, when it introduced synthetic urea resins to the United States after obtaining manufacturing rights from German interests.

Since then, the synthetic resins have done much to modernize production techniques and machinery used by the industry, including special adhesives spreaders, radio frequency and hot-plate edge gluing equipment. Once scarce laboratories are now numerous in the wood fabrication field, with the accent being put on research and control under capable direction.

Among the latest gluing developments cited by Mr. Wadsworth were:

1. Light-colored phenols that produce invisible but durable glue lines. They are cured by radio frequency or by raising the glue line temperature, by one means or another, up to at least 140° F.

2. The newly developed fortified catalysts used with ordinary urea resins which produce far more durable bonds than ordinary urea glues.

3. New light-colored, craze-resistant urea resin glues for general assembly in laminating and molded and curved work.

4. New resorcinol resin glues for high speed or low temperature gluing — a separate application method, but with it, gluing is possible at temperatures down to 40° F.

5. Long pot life mixes, using resorcinol resin glues during high temperatures, such as 90° F.

6. New catalysts and combinations thereof designed for long assembly resorcinol glues for bag molding.

Mr. Wadsworth also touched on the manufacture of composite board from sawdust chips and other wood waste by the "dry" method which is relatively simple as compared to the wet method which involves pulping, mat-making machinery and drying equipment. In the dry method, he

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"50% BETTER"...REPORTED A LARGE PRODUCER OF FINE RADIO CABINETS, AFTER CHANGING OVER TO HEAT-RESISTING BONDITE NEW PROCESS PAPER BELTS. ALL JEWEL ABRASIVE BELTS HAVE THE EXCLUSIVE SMOOTH-RUNNING VELVET JOINT THAT NEVER JUMPS OR LEAVES HIGH SPOTS.
BONDITE GARNET PAPER BELTS BRING OUT THE BEAUTY OF WOODEN JEWELRY BOXES. BONDITE IS A POWERFUL, HEAT-RESISTING ADHESIVE THAT ADDS EXTRA LIFE AND CUTTING POWER TO THESE JEWEL BELTS.
PLYWOOD, USED IN LARGE QUANTITIES FOR HOME CONSTRUCTION, CAN BE FINISHED FASTER, AT LESS COST, WITH BONDEX GARNET FIBRE... A SUPER-TOUGH ABRASIVE FOR DRUM SANDERS THAT LASTS UP TO 8 TIMES LONGER THAN ORDINARY GARNET.
SO REMEMBER JEWEL WHEN YOU ORDER ABRASIVES FROM YOUR DISTRIBUTOR. THERE'S A JEWEL PRODUCT FOR EVERY SANDING, POLISHING AND GRINDING NEED.
Abrasive Products, Inc.

pointed out, the waste is simply mixed with a dry synthetic resin powder, spread in pans or in a mold and then hot-pressed into shape.

Describing the scope of the adhesive manufacturers' service to the woodworking industry, Mr. Wadsworth said that manufacturers try to supply uniform quality products and do everything they can to see that those products are used for the purposes and under the conditions for which they are intended.

"We try to give quick and efficient technical service," he said. "We make available to customers and prospects modern laboratory equipment and personnel. We act as a consultant bureau and give specific engineering information when that is required. We also act as an information bureau for equipment manufacturers of every description.

"While we do have laboratories that are modernly equipped for evaluating glues, we cannot duplicate or reproduce exact field use of any products. So, it is always difficult to know just what a product will do until it is used in actual production. To prove our products, we need the cooperation and good will of the users—and if we ask for an opportunity to make a plant test, it is usually for the good of the entire woodworking industry. We are grateful for the cooperation which is usually so freely given."

Mr. Wadsworth called for the fullest possible cooperation of management with the manufacturer of adhesives, saying:

"Modern resin glues open new doors for the sale of wood in many forms, but they also impose new techniques on the plant personnel—greater care in preparation and use, closer control of equipment and methods. The adhesives manufacturers have upgraded their sales and service staffs greatly in recent years. We are sure industrial glue users will do their part in developing their staffs to use the modern glues now available to the best advantage of the great woodworking industry, and for the maximum utilization of our forest wealth."

Idea on Use of Hide Glue in End Grain Gluing

Application of liquid hide glue in end-grain gluing is shown in the above photograph, made in the labratories of the Franklin Glue Company, Columbus, Ohio.

As a first step, after the pieces have been prepared, Franklin recommends that liquid hide glue be spread thinly on the two surfaces to be glued together and allowed to dry. This takes only a few minutes.

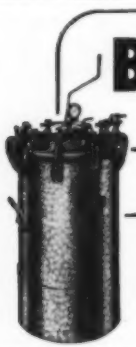
Then a second coating of the hide glue is applied and exposed to the air

a few seconds until it becomes tacky, as shown in the photo.

After the two pieces have been clamped together tightly for several hours, the joint becomes stronger than the wood itself—even in the case of the usually difficult end-grain joints.

A special application, according to the company, has been in the building of stairs. Joints made in this manner tests show, are easily planed over since joints made with liquid hide glue are never brittle or hard, and tools are not dulled.

All decay action stops when moisture content of lumber drops to 19 per cent or less.



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If you do not have a Binks catalog available we will be glad to give you complete information and prices on any type or size of tank by mail or phone. Orders will be filled in the order in which they are received.

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Wood Waste Usage Told

Iron Mountain, Mich. — "As lumber continues to decrease in quantity and grade, wood product manufacturers are becoming increasingly interested in developing markets for wood wastes," Armin Elmendorf, president of the Elmendorf Research Company, Chicago, told members of the advisory committee of the Forest Products Research program of Houghton (Mich.) Tech, which met here recently.

Elmendorf emphasized that most developments in the wood-waste division of the research company were being announced at the meeting for the first time. Introduced by Dr. Hereford Garland, director of the forest products research division at the College, Elmendorf discussed uses of sawdust and shavings—especially those from the hardwood industry —in making synthetic boards.

He said the Chicago laboratory men are interested in developing a board-like product with solidity. A good amount of synthetic binder can be made from sawdust and shavings, he pointed out. "Chip-fibers, however, are different from those made from sawdust," he said, "and do not have the same strength.

"What kind of a board can be made from sawdust and shavings? Our Chicago firm can now produce a board nearly as hard as Masonite pressed board. Among processes used are cooking and—developed in the past two years—chemical treatment and pressure, so that an economical product can be marketed.

"A product of this type hasn't the physical properties of Masonite, but we produce a good board. It can't be nailed as well as Masonite, but it's 'dirt cheap.' The particles have been fused with nothing but constituents of the sawdust. However, determination of adaptable board thickness is still in the balance."

Elmendorf pointed out that the use of Portland cement, in processing sawdust, is old. The resultant product, he said, requires constant pressure during processing; its manufacture requires much equipment, and complications of manufacture detract from smooth production.

"Using gypsum for binder," said Elmendorf, "plus other elements, serves no structural purpose, and reduces the weight of the final board. A pure sawdust-gypsum board, consisting of the two elements alone, can be made, however. Yet it can't compete in strength with other gypsum-binder board products, and there are no real commercial possibilities."

Elmendorf then exhibited types of synthetic boards produced by his company from hard and soft-wood wastes. Showing a veneer sample, Elmendorf said: "Veneer plants have a tremendous annual tonnage of wastes. Two years ago we tackled the problem of using this material in making boards of various sizes and kinds.

"The strands are thin, very tensile and have large possibilities for binder-board production. However, a different type of board is produced from veneer wastes. It is competitive with any hardwood board's bending strength, withstanding 5 to 10,000 pounds per square inch. It has large possibilities for future use."

THE ONLY SHAPER
having "down-draught" exhaust for chips from the cutters, and ½" and ¾" cutter-arbors formed on a solid one-piece vanadium-steel spindle—stronger, more accurate and safer than any 2-piece type. Merely invert the quill to change from ¾" to ½" arbor without special tools.
BOICE-CRANE NO. 2120 SPINDLE SHAPER
Large capacity. Designed to handle the bigger, professional size cutters that make most shapes, even wide ones, as for caskets, in one operation.
Large 1" diameter precision ground spindle, carried on two high quality dust and grease sealed ball bearings, stays true even after years of running wide, deep cuts. The bearing-seats in the quill casting, as well as the entire body of quill are all finely ground to precision dimensions.
The table features a large opening with provision for nested table rings, with these advantages: (1) All cutters, up to 6¼" diameter lower below table to undercut for greater safety. (2) Undercutting lessens danger of springing spindle. (3) Undercutting brings cutters closer to spindle bearings to reduce strain and wear.
SPECIFICATIONS:
Table (has 1 miter-gauge groove): 20" x 27½".
Table with Front Wing: 28" x 27½".
Table-Opening Diameters: 6½", 3½", and 2".
Widest Bevel Edge Knife Capacity: 2½".
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Largest Diameter Cutter Capacity: 6¼".
Vertical Spindle Travel: 1¾".
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Power: ½ h.p. for Cutters 3½" and less. 1 h.p. for Cutters over 3½".
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• Jointers
• Thickness Planers
• Saw Jointers

Sans Pareil

Fifty million Frenchmen would probably say, "Sans Pareil" (matchless) — and we wouldn't be a bit surprised if we heard an oo-la-la from you!

Besides pictures of curvaceous beauties, however, we also offer another source of interesting discussion. Finishes of distinction that have gained wide acceptance from manufacturers of all types and sizes of products.

The artists in our Creative Studio render an invaluable service by producing these finishes exactly to your specifications . . . or — if you prefer — they will take the initiative and develop a coating which is in keeping with the design and use of your merchandise.

You will find it advantageous to call on our Creative Studio for recommendations. No obligation for an analysis of your finishing problem.

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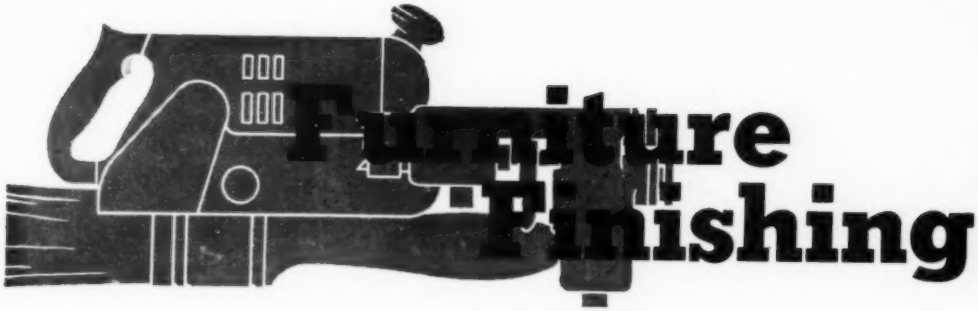


IT ALL ADDS UP

While a finishing consultant is able to identify and prescribe, in a general way, for finishing defects after they have happened, the "trick" is to put a positive finger on the specific cause in time to prevent its happening.

By
W. T. Smith

Since the furor and the shouting of the late world conflict has died down and the initial consumer rush for merchandise has been relieved, in a measure, we detect, we hope, a tendency in the wood usinng industries of a growing quality consciousness in the finishing phase.

While, like the poor, they are always with us, the requests for faster and cheaper finishes are a little more often relegated to the background in favor of pleas for a better finish from both the appearance and endurance standpoints. There are many requests from distraught manufacturers who are devoting care and expense to applying the best finish they know how but which leaves something to be desired. The finish develops a too great amount of checking too soon, the finish lacks body and is "hungray," the pores are gray, the system lacks clarity or cannot be rubbed to an acceptable surface within the allotted budget for the operation. The story is a common one: the finisher buys the best materials that, to his knowledge, he can procure; applies them in the manner found most favorable from his experience and from all that he can glean from that of others. The finishing engineer or consultanit is therefore asked to explain, in a few well-chosen words the magic abracadabra that will turn a mediocre finish into the answer to a finisher's prayer overnight.

We have, we believe, stated in these pages before that the asking of a finishing consultant the key to a consistently beautiful, trouble-free wood finish, or "what is the matter with my finish?" is much like asking an economist what causes an economic depression. He knows, in a general way, the nature of the numerous contributory causes and can relate at length the details of the cause, after it has hapepned but is embarrassed by requests to put a positive finger on the specific cause in time to do anything about it.

Many Factors Contribute to Final Result

Quality in the wood finish or the prevention or correction of defects lies in the equitable control of a large number of factors all of which contribute to the final result. Not a few of these factors and conditions have their origin in the white wood millroom where the stibility of the wood structure, the selection and correct laying of veneer, sanding, glue sizing and the complete elimination of sanding dust have each, a definite effect on the final resulting finish.

Pleasing tones in the coloring from the staining operation, cleanness, brilliance, and that intangible thing called character of the wood are affected not only by the direct selection of the type and

nature of coloring elements used, but by controlled and manipulated penetration of the color. This goes back to veneer selection, sanding and glue-sizing. Sanding belts used just a little too long in order to get the maximum wear from them, can do a microscopic tearing job on surface fibers which will make the best stain do a muddy job of coloring. The actual worrying off of a surplus surface fiber by the two way motion of hand sanding or of the old reciprocating stroker does a much more effective job than does the one way friction of a conventional belt sander which, with the heat generated at the point of contact, tends to lay down a certain amount of fiber rather than cutting it off.

Dipping of stains is confined almost exclusively to those of water soluble type since it's not usually practicable to maintain a constant consistency, due to evaporation, or types using a more volatile solvent.

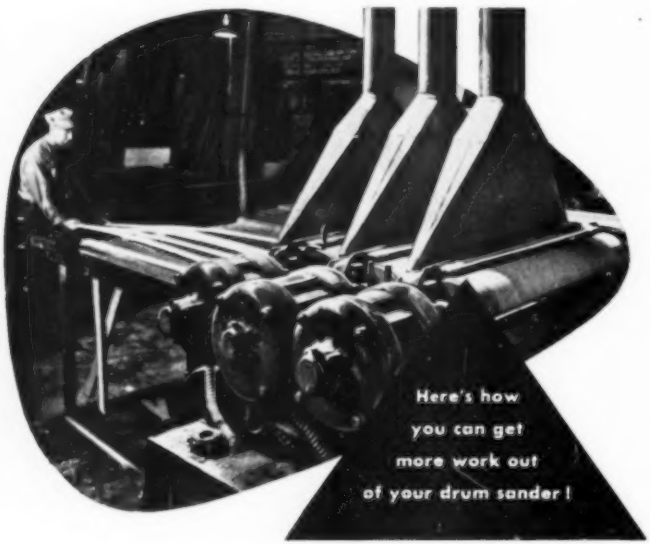
Spray stains are applied in one manner only: in a shiny wet coat, just short of running. The use of the educated trigger finger of the operator in applying a light, medium or heavy coat has resulted in more irregularly stained work than can be calculated .Density or depth of color is controlled by the concentration of the solution, not by the relative skill, or whim, of the operator.

The relative porosity of the adjacent elements of the surface wood structure account for the character or contrast coloring which brings out the figure of fine wood. A stain, such as a pigment stain, or a water stain which is wiped with rags immediately after application adds a great deal to the contrast of the effect by emphasizing the highlights and removing a portion of the color from the higher, harder spots.

Fillers a Necessity in Wood Finishing

Fillers might, conceivably, be considered one of the necessary evils of wood finishing. Necessary to bring large pores to a level with the rest of the surface and, as a secondary consideration, to bring out figure by emphasis and contrast of the pore structure, they can, in both formulation and application, cause no little trouble.

The filler, itself, is a very highly pigmented non-film forming material which forms an amorphous deposit in the pore, and to a certain extent all over the surface, depending on the efficacy of the cleaning operation which is not at all conducive to a maximum of adhesion of the following film-forming materials. Severe shrinkage in the pore may result from any one of several couses; the formulation of the filler itself, lack of proper curing before coating or from the severe action of nonconforming top coats. Graying of filler—a most common and persistent defect—results, similarly, from a number of causes. Various elements of the formulation of the filler itself, all of which have never been fully identified by the manufacturing industry, cause consistent, or intermittent graying as does incomplete drying of the filler, the nature of the topcoat, excessive humidity, sanding on the filler or the bleeding through of heavy ends of solvent from the stain. Insufficient drying has, of course, an obvious remedy. Bleeding from below, or attack from above may often be con-



This photomicrograph gives you the answer. It shows the cutting edges of Armour's Electrocoated Garalun, enlarged 665 times. See its cutting power for yourself. The grains of aluminum-oxide are coated to the backing by the patented Electrocoating process which stands the grains at ninety degrees to the backing with the sharp ends up for faster, cleaner cutting action. The grains are uniformly spaced to provide a smooth, even finish. Electrocoating also retards clogging on filling operations. Result–faster and better sanding work!

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trolled by experimentation with wash or barrier coats under, or over, the filler. The use of a tint coat immediately over the filler is often of material assistance in preserving the integrity of the pore color.

Pinholing, originating from the filled pore is a spector which has haunted finishers, especially of mahogany ,since the infancy of the industry. Again, as is true of most defects of wood finish, the cause is rather legion than individual. Due to the rough, splintery, and often bottle-necked nature of a mahogany pore, filler used just a little too heavy will not enter, and leaves a pocket underneath to cause plenty of trouble when solvent enters it, tarries a while and then tries to come back out. A filler compounder with a too low ratio of vehicle to pigment will induce bubbling and pinholing fairly consistently due to the increased solvent retention of the filler mass in the pore. It follows also that even the best filler can be caused to produce pinholing by aberrations in handling and application. If, for example, filler is allowed to settle and skin over several times and the skin removed for use, the vehicle and drier ratio will be reduced until the excess of pigment deposited in the pores is much too porous and retentive of the solvent of the coating material and pinholing results. Careful fine sanding, sponging and glue-sizing which tend to eliminate surface fibers and fuzz, aid in clean ,tight filling by permitting free entry of the filler and close, clean packing of the pores.

Quality Finish Depends on Workmanship

It has often been said, and accurately, that the quality of a wood finish lies, in by far the greater portion ,in the workmanship expended rather than in the properties of the materials. The exact application of particular care in the spots where it will do the most good is a matter of experience and affected in a large measure by the local conditions. It is largely true that a wood finish is like many another accumulated structure in that the final result will be no better than the foundation on which it is laid. If, for example, a very fine, level rubbed finish is desired, anticipation of that effect must be made in the white wood mill in the flatness of core stock and in the sanding methods used in preparing the surface. The surface must be free from scratches and protruding fibers, or whiskers, for a clean, effective filler job.

In modern cut schedule, high speed finishing work, one of the more common complaints is of the difficulty of obtaining sufficient build and fullness and complete freedom from that "hungry" look. It might be wel lto keep in mind, in this vein, that all cellulosic, or lacquer-type materials, which dry to a film by evaporation of solvent only, resoften and "let down" with each successive coat. The more porous and irregular the surface, the more faithfully will each irregularity and depression be reproduced by each coat added. Lacquers, in other words, are not "self-leveling" but their high surface tension tends to make them adhere to the exact details of the surface.

Remarkably good effects are obtained, on occasion, by mixing in the schedule, lacquer-type materials with resinous, or so-called "synthetic" materials which hold out well and do not let down with subsequent coats. A typical example is the well-known practice of using a high viscosity lacquer sealer under a flat varnish. The practice, unfortunately, carries a considerable amount of hazard in that it is difficult to find a synthetic-lacquer combination which is entirely compatible from the standpoint of complete non-lifting and adhesion of one material to the other.

It is regrettable that there is no royal road to a fine finish wherein one has only to observe the rules to produce a consistently high quality result. Wood finishes still continue to reflect quite faithfully in their degree of quality, the amount of actual labor expended in their production. There are still probably from three to six excellent reasons for every defect which plagues the applier of wood finishes.

Tests Made of Flooring Technique

A new procedure for installing flooring in new housing construction has been developed by the University of Illinois Small Homes Council. The Council is engaged in intensive research and experimental work in connection with the Industry Engineered Home Program, initiated by the building industry to reduce housing costs.

In one of the experimental houses constructed recently the oak flooring was installed throughout before erection of interior partitions. The flooring was then covered by layers of thick paper to protect it from damage by the traffic of mechanics who later put up pre-assembled room partitions. The procedure effected a saving of 12 hours' labor.

This method of construction is made possible by modern engineering procedure which places all of the load-bearing responsibility on the exterior walls. In conventional construction the framework for the interior partitions is put up with the other framing and frequently helps to support the upper structure. The finish flooring is laid after all other work except the final interior trim has been completed.

Flooring experts point out that failure to protect the finish flooring adequately during the erection of the partitions might result in damage which would nullify the savings in labor costs.

Old Ship Ways Used for Unloading Mahogany

Idle for a long time after Japan's surrender, old launching ways of a war time New Orleans shipbuilding company now serve as an unloading area for West African mahogany.

New Orleans dockside facilities, though among the world's best, proved inappropriate for the handling of the bulky logs. Landing them proved slow and inconvenient.

Yet mahogany from West Africa continued in ever increasing demand by makers of furniture, boats, autos, musical instruments, etc.

Theodore Brent, president of the Mississippi Shipping Company, largest carrier of West African mahogany to U. S. Gulf ports, suggested the use of the idle concrete ways and gantry cranes in a New Orleans wartime shipbuilding yard.

Today thousands of tons of mahogany logs, some 20 feet long and weighing 10 tons, are unloaded easily and swiftly from Delta Line ships on to roomy launching ways where Uncle Sam once built his Victory ships.

Texas Lumber Firm Granted Charter

Houston, Texas—Texas Pine & Cypress Company, merchandise, was granted 50-year-charter of incorporation January 21, 1949. Incorporators: Garrett R. Tucker Jr., A. W. McDermott and G. W. Cleveland Jr. Authorized capital stock was listed at $25,000.

White Pine Trees Making Fine Comeback

Marquette, Mich. — Notwithstanding the heavy inroads of early timber cutting and of roaring forest fires, white pine forest of Michigan are on the way back, says C. A. Boyer, in charge of Federal-state white pine blister rust control, and chief of the Bureau of Plant Industry, of the State Department of Agriculture.

Michigan's white pine forests are, however, seriously threatened by a fungus disease known as blister rust. This disease attacks and kills white pines. Since 1929 state and federal departments of agriculture along with many other forest owners, have been waging a steady campaign to destroy host plants growing near valuable stands of white pine. The host plant transmits the fungus to the pine tree. Over 74 millon of these host plants already have been destroyed.

Blister rust on white pine trees forms a canker in the live tissue on the branch twig, or stem. Spores are produced in the spring of the year that travel by air to the leaves of currant and gooseberry plants. These are the same common wild and cultivated gooseberries and currants growing in woods and gardens. The spores live and grow on the leaves of the host plant during the summer. In the fall new spores are produced which in turn travel back by air to healthy white pines, which then become infected with the fungus disease.

As the disease progresses in the live tissue of the white pine, life above the canker dies—and death comes slowly but surely to the tree.

Only spores produced on currant and gooseberry leaves are capable of infecting the white pine. Thus, when currents and gooseberries are removed from white pine stands, the disease cannot spread to healthy trees.

Over one-third of over 400,000 acres of white pine has been so completely eradicated of the currant and gooseberries that no more of these plants are expected during the life of the white pine now growing there. Some eradication work still is required in the remaining two-thirds, to protect the white pine against the blister rust.

Handicapped Men Valuable to the Industry

M. W. Nunemaker, general manager of the Munising Wood Products Company, Marquette, (Mich.), recently said: "Physically handicapped employes have proved to be definitely superior to able-bodied employes in several respects in various jobs in our company during the last several years."

Nunemaker made his statement in connection with observance of "National Employ the Physically handicapped week." Munising Wood Products' experience with physically handicapped persons was so satisfactory, Nunemaker said, "that we have kept them on as regular employes, although at first we were somewhat hesitant as to whether they would be able to make good.

He added: Much to our satisfaction, we found that they have actually proven to be more careful than other employes and therefore lose less time because of injuries, illness or absenteeism than is true with able-bodied employes.

"We welcome qualified handicapped employes. Qualified that is, with the necessary physical capacities and abilities to do the jobs to which they may be assigned. It is worth a little extra trouble to match up these physically handicapped employes with jobs that they can perform because, when so matched with suitable jobs, they are not handicapped in such particular jobs. Handicapped workers actually help to build up the morale of the other workers.

"Because our handicapped employes are more steady, they usually accomplish just as much as do other workers in the same jobs and frequently more so, as they appreciate and take care of the job they are holding. Having learned to live with their handicapping disabilities probably has been responsible for developing these better worker characteristics.

"Of course, we sometimes make mistakes in putting a handicapped worker into a job that requires the use of certain physical capacities that he does not possess, but when we shift him into the right kind of a job that he can do, he invariably has become a highly satisfactory worker. We agree that it certainly is their abilities that count rather than their disabilities."

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What Are Most Wanted in Office Equipment?

James C. Page, who plays housemaid to 435 Congressmen and who is the House Property Custodian, says the most wanted items in office equipment are: Filing cabinets; revolving arm chairs, black (or red) leather, three-person davenports; open book cases (four shelves each); walnut base typewriter stand to which is attached a warning, "positively not to be used as a stand for flowers." Said Page, "It discolors the finish."

★ West Coast News ★

By Staff Correspondent

Bellingham, Wash. — Henry J. Siemons, pioneer lumberman, 76, died of heart attack. He was one of six brothers who operated the Siemons Lumber Company, beginning 1891.

* * *

Portland — J. F. Radmacher, has opened his manufacturing plant at 1729 SE Hawthorne, woodcraft novelties, furniture. He came to Portland some 39 years ago from Roumania. He began his apprenticeship in toymaking when 5 years old. He continued his trade in Portland with the F. S. Harmon Co., Doernbecher Manufacturing Co., Carman company and other concerns.

* * *

Salem, Ore. — Satisfactory progress, with particular reference to utilization of delayed woods and research in the utilization of low grade lumber, is being made by advisory committee of Oregon forest products laboratory at Corvallis, Ore.

Extraction of wax and tanning from Douglas fir and pine bark is being discussed along with budgets for the current fiscal year and the next biennium.

Governor Douglas McKay is chairman of the special committee.

* * *

Portland — A $13,000 building will shortly be erected by Sunblend Venetian Blind Co., 2585 Willamette St., Eugene, Ore.

* * *

Yakima, Wash. — Fire of undetermined origin destroyed the plant of Potlatch Lumber Co. at Buena with damage estimated at $65,000. Fire started in faulty stove.

* * *

Hoquiam, Wash.—A new woodworking concern to be known as Hoquiam Woodworking company has been opened by Louis Welch. The firm will specialize in custom built furniture and cabinets.

* * *

Cranbrook, B. C. — H. B. Murray Lumber Company operated by Robert and Bruce Murray was totally destroyed by fire with loss of $30,000. The building was destroyed along with a Diesel engine and all contents. Undetermined. Partial insurance.

* * *

Seattle — The Elliott Bay Lumber Company of Seattle has started distributing mahogany locally from its own Philippine logging and milling operations, believed to be the first such postwar trans-Pacific setup of its kind.

The M. Trumbo company of Portland, building material jobbers has been named distributor for Oregon and southwest Washington for the mahogany casings, jamb, moldings, paneling and plywood.

* * *

Portland—John F. Haviland and Carl M. Frantz, vice-president of Allsop and Frantz Lumber company, have formed a partnership in wholesale lumber business.

* * *

Ione, Wash.—William Sinn has purchased the interest of his partner Max Hammond in the Ione Lumber company, and is now sole owner.

* * *

Portland — Herbert S. Brix of the Belding Logging Company, died of a heart attack. He was a native of Astoria, Ore., born July 7, 1898, and son of P. J. Brix, a pioneer Oregon lumberman.

* * *

La Grande, Ore. — The Mt. Emily Lumber Mill has closed because it cannot ship lumber eastward, according to President A. J. Stange. Some 200 employees are laid off. A freight embargo on the Union Pacific lines through Laramie and Rock Springs, Wyo., made it impossible to continue production.

* * *

Tacoma, Wash.—An all-time record production of plywood from Pacific Northwest factories was predicted for '49 by Chas. E. Devlin, managing director of the Douglas Fir Plywood Association.

* * *

Eugene, Ore.—Russell C. Fields, for the past four years office manager for West Coast Lumbermen's Association has resigned his post. He has accepted a position as personnel manager for Edward Hines Lumber Company, Westfir division.

* * *

Portland—Your new house of the future may be built of sawdust—and it will be highly insulated and fire resistant.

Successful initial experiments with sawdust "concrete" at the University of Idaho's agricultural experiment station are announced by the Raw Materials group, a body of Northwest engineers and chambers of commerce, organized to help bring together raw materials and expanding Northwest industry. Much sawdust is now sold and burned by Northwest sawmills.

A. O. Bartell, managing engineer of the Survey, said the Idaho experiments have developed a strong lightweight concrete made of one part cement, one part clay, six parts sawdust and one part diatomite (a light earthy material usually used as an abrasive or absorbent).

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Northeastern News

By Staff Correspondent

Jamestown, N. Y. — Glenn LaDue Wilson, 49, prominent Jamestown plywood manufacturer, died Feb. 17 after a two-month illness. He was secretary, assistant treasurer and general manager of the Pearl City Plywood Company, Inc., and a former president of the Jamestown Manufacturers Association. He was secretary-treasurer of the Eastern Plywood Group.

* * *

Buffalo, N. Y.—The Namco Woodworking Co. has been established at 284 Grape St., Buffalo, according to papers filed with the county clerk. Principals are William A. Meyer, Henry J. Endres and Earl A. Newton.

* * *

Kane, Pa.—A new and much larger lumber mill is being erected here to replace the Bowman Lumber Company mill which was destroyed by fire Dec. 27. The new mill will have the latest equipment for handling logs direct from the woods job to finished lumber.

* * *

Hamilton, Ont.—Walker Brothers of Ontario, Ltd., plywood firm, has purchased a warehouse and property on Parkdale Avenue North for $60,000.

Sheboygan Mayor Asks Probe of Frost Co. Sale

Sheboygan, Wis.—A City Council investigation of the recent auction of the Frost Plywood and Veneer Co. has been asked by Mayor Willard M. Sonnenburg.

The company turned down a bid of $102,500 from a Milwaukee woodworking firm and sold the unit for an amount, reportedly about the same, to the Garton Toy Co. of Sheboygan.

The mayor urged the council to inquire specifically into "why a bid from a Milwaukee firm, which proposed to continue an industry, was turned down in favor of another bidder who intends to close the building, throwing about 160 men out of employment."

The Garton firm announced it planned to use the building as a warehouse with the possibility of expanding manufacturing operations into it later.

The Frost company disposed of its plants here and at Antigo within the last month.

Sonnenburg also suggested the Association of Commerce be invited to poin the council investigation "because of the public interest involved" and to learn what steps if any the group may have taken to "save a growing industry for Sheboygan."

He said no distressed industry asked city for aid or relief either in the form of taxes or otherwise. His recommendation was referred to the committee of the whole.

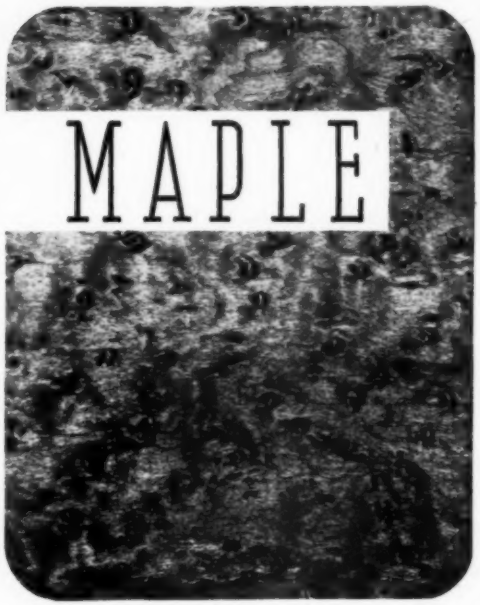
Houston Sash & Door Firm Organized

Houston, Texas — 20-year-charter of incorporation was granted The United Sash and Door Manufacturing Company, January 22, 1949. Incorporators: Nolen E. Elam, Herbert E. Evans and John Thomas Fisher. Authorized capital stock was listed at $5,000.

Sawmill Fire Loss $100,000

Bearden, Ark.—The Bearden Lumber Company sawmill here, was destroyed by fire during the night of February 12, 1949. Loss was estimated to be $100,000.

BIRDS EYE MAPLE



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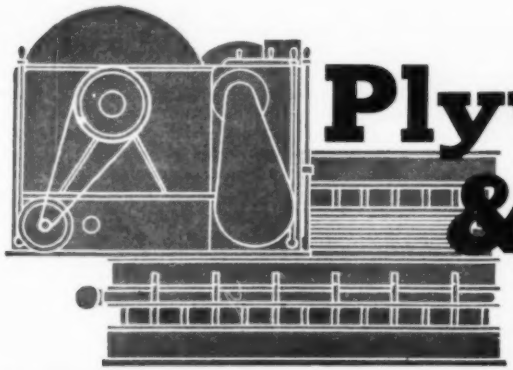


Plywood & Veneer

FABRICATION
APPLICATION

Fundamentals of Edge Gluing Lumber

By

Thomas D. Perry

Whenever a group of woodworkers gather, for a convention or at a furniture market, or even for no good reason at all, one subject is almost sure to come up for discussion, sooner or later: that of making satisfactory edge joints in lumber, either for solid tops or for plywood cores.

Many answers have been suggested and there is no apparent unanimity of opinion among experienced operators of comparable ability. Some feel that a sawn joint, by a straight line rip saw, is adequate, while others insist that nothing less than a joint made with a rotary cutter head, as on a jointer, will satisfy them. Some demand a tongue and groove joint, others prefer a flat joint, each buttressing his position with logical and reasonable arguments. An author would have to be more daring than the writer to attempt to determine the "one best way" to make an edge glue joint to paraphrase the late Frank B. Gilbreth, the motion study engineer.

However an occasional review of the fundamental principles involved may help readers to clarify their thinking, as well as to improve the present standards of their operations. That there are many factories where edge gluing techniques can be improved, must be obvious to anyone who visits as many woodworking factories as does the writer.

Properly Dried Lumber

There is a considerable range of moisture content, in which strong edge joints can be made with most glues and adhesives, estimated to be from 5% to 15%. This does not mean that a satisfactory glue joint can be made between boards that typify these extremes, since no two adjacent strips should vary in moisture content by more than 1% to 2%. Nevertheless, lumber to produce a solid top, to be used in steam heated rooms, should be at the low end of this range, while the lumber to make a table or chair to be used on a porch or in an outdoor garden, may be near the top limit.

The most important criterion is that lumber should be glued together, edgewise, at as nearly as possible the moisture content which it will acquire in the service or exposure for which it is intended. Lumber just prior to gluing and wood products after gluing are constantly changing as to moisture content, depending on the severity of the exposure. Unless lumber is glued together at a moisture content approximately the mean of this service exposure range, joint trouble is apt to occur. Substantial shrinking or swelling imposes severe stresses on a glue joint, and also tends to warp and twist the table top or chair seat.

The hazards of this "come and go" in lumber are reduced by the use of narrow strips, not over 3" wide, properly glued together. Wider boards should be ripped and reversed to reduce twisting tendencies. This maximum width factor is considerably lower than it was 20 or even 15 years ago, and is one of the lessons learned the hard way in the relentless school of experience.

Jointed Flat Edges

The majority opinion, at a recent glue forum, held at the annual meeting of the Hardwood Dimension Manufacturers Association, indicated a preference by the panel of speakers for planed flat joints. It was also admitted, in most instances, that a properly sawed joint gave satisfactory results in all except the most exacting products. Joiner joints, as a rule, are straighter and squarer than sawn joints, and provide a closer fit, an essential feature in all successful edge gluing.

Freshly planed joints with sharp cutter heads, allowing only a few hours interval to elapse between

jointing and gluing, are highly desirable. An interval of several days may allow minor dimensional and surface changes that modify the quality of the glue joint.

Planed joints are more costly than sawn joints, due both to the additional machining operation and to the wastage of lumber widths. The removal of 1/16" on both edges of a 3" wide strip amounts to around 4% useful yield of lumber and may not be justified in moderate and low priced wood products.

Tongue and Grooved Edges

This type of edge jointing was fairly common 20 years ago, but currently, has few advocates. A tongue, extending ⅛", results in a waste of 4% on a 3" width. Its only justification is as an aid to centering the boards at the time they are clamped together.

An exception should be noted in the tapering dovetail joint made on a Linderman machine, where the wedge shaped tongue is used, instead of a pressure clamp, to hold the component strips together until the glue gets its initial grip.

Sawn Joints

The improvement in cutitng quality and accuracy, during the last few years, has made the straight line rip saw a standard piece of equipment in producing edge joints. If properly prepared lumber is ripped by an operator with good "wood sense," straight, true and square edges will result. The sawn edge is somewhat rougher than the jointed edge, and requires more pressure during the clamping operation, due to the need of insuring intimate contact all along the edges. This roughness tends to make a thicker glue line, but more or less coincides with the old theory of tooth scraping surfaces to be glued.

The important requirement of a sawn edge is that the board is fed through the ripsaw without wobbling, since such rocking tends to produce a wavy edge, as well as to permit a thick and thin glue line.

Pressure Requirements

The measurement of edge pressure in a clamp is admittedly difficult, and depends largely on the human equation. The handles for tightening the clamp screws are usually about 4" long, ("T" shaped or crank), and the clamps should be about 12" to 15" apart. Pressures of about 100 lbs. sq. in., along the edge, are normally obtainable by hand tightening. With the aid of a 6" section of metal pipe, pressures up to around 250 lbs. sq. in. can be secured.

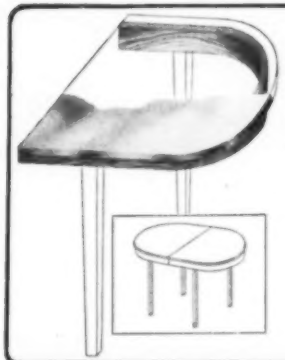
Pressures on planed joints should be of the order of 50 to 100 lbs. sq. in. and on sawn joints from 100 to 200 lbs. sq. in., depending on the species of wood.

Close, true fitting is absolutely essential for a strong durable glue joint, whether planed or sawn. The most troublesome factor in pressure application is the warped board or strip that is hammered down as the clamp screw is tightened. A moderate amount of pounding on unwarped boards is customary to even the surface and permit surface planing with maximum thickness. Pounding down warped boards, if they protrude ⅛" or less, may not be too serious, but a similar and heavier pounding on boards that are 3/16", ¼" or more out of surface alignment can be very harmful. The damage is two fold: (1) in attempting to flatten warped boards by pounding, the mating (fitted) edges become wavy, resulting in either inadequate pressure or open joints at some spots and compressed wood and starved joints at other spots; or (2) these compressed sections, after unclamping, are under severe internal stress, and tend to resume their former normal shape, especially with any change in miosture content. Under such circumstances, with warped boards, defective glued joints are almost inevitable. They are much more serious in solid table tops than in lumber core stock.

The above comments with regard to pounding refer especially to hand clamps and clam carriers. The surface pressure in such continuous machines as Plycor and Panel-Flo, is not likely to develop trouble with slightly warped board, and little difficulty is to be anticipated with various types of electronic edge gluers, which provide moderate surface pressure.

Glues for Edge Joints

Animal glue is the most widely used for edge splicing, although in the last few years urea resin adhesives have made considerable inroads on this animal glue application. The average clamp carrier has an operating cycle of from one to two hours. With animal glue, in which the boards to be glued must be kept warm, a two hour or even an hour and a half cycle is practicable. With urea resin adhesives a two hour cycle is possible only if the clamp carrier is hooded and the interior temperature, around the glue jointed areas, is maintained at around 120° F. Otherwise, at noon temperatures urea resins require about 4 hours for proper cure



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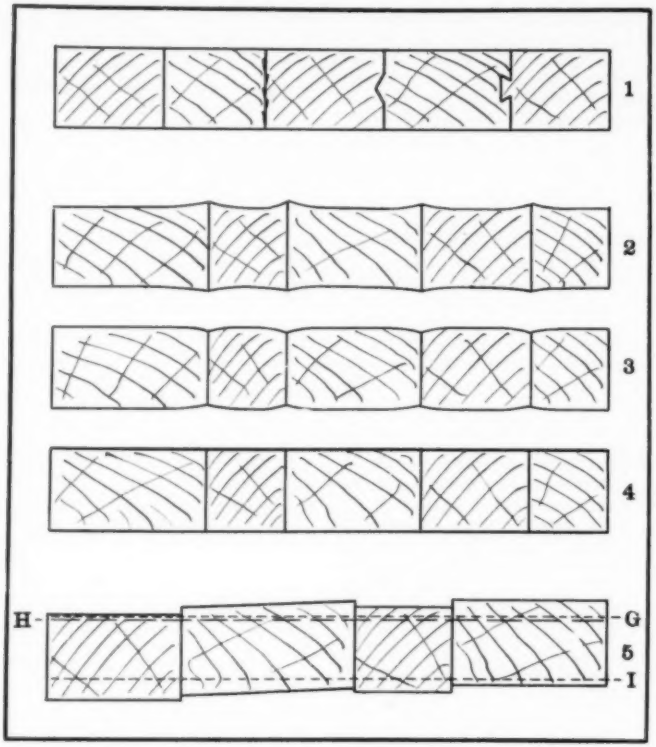

1. Types of edge joints, from left, jointed, sawn, tongue and groove, dovetail.
2. Surplus moisture from glue swelling wood into ridges at the joints.
3. Depressions at the joint, caused by planing before the moisture content of the wood has become normal.
4. Proper planing after proper drying (2 and 3 are exaggerated for clarity).
5. Sequence of proper surfacing:
   G. First planing on face to remove face defects
   I. Second planing on back to approximate thickness
   H. Final finish planing of face side to net thickness and free of defects

while under pressure.

One exception should be noted, in the use of the Plycor and Panel-Flo continuous machines, where the urea resin glue joints pass between steam heated plates, with a curing cycle of some two minutes at 300° F.

Another variation in the general statement above is the two component urea resin adhesives, Colpress-10, where the resin is spread on one edge and the catalyst or hardener on the opposite or mating edge. Under these conditions the setting time may be from 10 to 20 minutes, under normal room temperatures, at the end of which period clamps may be released.

The new electronic edge gluers utilize resin adhesives and have very short clamping cycles, in the vicinity of one or two minutes, but so far standard clamping time requirements for this type of machines have not reached a basis of general acceptance.

Evaporating the Water From the Glue Mixture

When glue is spread on an edge joint, at the rate of 50 pounds per 1,000 sq. ft., approximately half of this weight is water, in which the glue or adhesive solids are dispersed or dissolved, thus introducing some 25 pounds of water into 1,000 sq. ft. of glue joint. The assumption that this glue water penerates some $\frac{1}{8}$" deep directly into the edge wood, and also surface-wise from the adjacent squeeze out, is considered entirely reasonable. This $\frac{1}{8}$" layer of wood, of poplar as an example, weighs approximately 275 pounds per 1,000 sq. ft. Hence some 8% additional water is supplied to the wood at this critical point, directly at the joint, and swelling inevitably occurs as a ridge along the joint. When the glue or adhesive is set by heat, this surplus moisture is quickly evaporated, but when the hardening takes place at room temperature, this surplus moisture must be caused or allowed to evaporate or diffuse into the wood before planing. This may be done by employing redriers in a matter of hours at 125° F, or at room temperature in two or three days, during either of which processes stickers or separators should be inserted between the layers of glued lumber.

It is of the utmost importance that glued stock reach a uniform and normal moisture content before planing, else slight depressions or sewers will occur at the surface line of the glue joint, due to evaporation after planing.

A comment should be noted regarding the sparing use of any adhesive in any edge joint. A thin glue line (.003" to .006") is always more durable and stronger than a thick one. Double spreading, on both mating edges, is never good practice, as it introduces too much moisture at the critical joint, makes too much squeeze out and is costly. A thick glue line, or one that is thick in spots, is a distinct disadvantage and is weaker than a thin glue line. Glue should never be used to compensate for poor workmanship with irregular or wavy edges. Glue is not a satisfactory plug filler, its sole purpose is to hold the edges together, and the use of too much glue is distinctly hazardous.

Surface Planing

Proper planing of surfaces which have been glued together is of prime importance. The surplus water, added in the glue application, has no adhesive characteristics whatever, and is merely a vehicle to assist in locating the adhesive ingredients where they can fulfil their function of knitting the wood surfaces together firmly. Hence this unwanted water must be eliminated by properly drying the glued lumber to a normal moisture content. It is imperative that this drying be completed before planing. This drying period also provides an opportunity for warped strips to become adjusted.

The best planing technique re-

quires three surfacings, the first to make the "face" side free of defects, followed by planing the "back" side to within 1/32" to 1/16" of the final thickness. The last planing operation is the removal of this small surplus thickness from the "face" side. This final planing should always be a light cut with a sharp cutter head, since heavy cuts are never as satisfactory or as free from cutting defects as are light cuts.

After Planing

Properly edge glued stock, made by carefully following the various steps outlined above, may still cause trouble if the subsequent operations are slighted. If used as cores in plywood, warping may still occur if the outer plies of veneer are not well balanced on the center line of the construction. If used as solid table tops, or chair seats, both surfaces must be similarly treated as to coatings and finishes. While wholly impenetrable finishes are not available, both surfaces should be sealed to an equivalent degree against absorption of moisture from, or evaporation of moisture to, the atmosphere surrounding the finished product in service. Any such change in moisture content tends definitely toward warping and twisting.

Conclusions

The equipment and adhesives for edge joints are going through a transition period, in which the modern tempo is considerably accelerated over the past. The fundamental principles, which are outlined above, however, have not changed appreciably over the years.

It may be well for any manufacturer of edge glued stock to check over his present procedure and correct any operating errors that may have crept in, due either to lack of care or failure to properly evaluate the importance of adequate processing.

MICHIGAN NEWS

By Staff Correspondent

Grand Rapids Furniture Men Elect

Grand Rapids, Mich.—Frank Van Steenberg of Grand Rapids, vice-president of Baker Furniture, Inc., of Holland, was elected president of the Grand Rapids Furniture Exposition association recently to succeed L. R. Mattson of Hastings (Mich.).

Other officers are: Vice-presidents, Thomas G. Kindel of Grand Rapids, who succeeds Van Steenberg, and Herbert E. Brooks, Gardner (Mass.), re-elected, and secretary-treasurer, Charles F. Campbell, Grand Rapids, also re-elected.

Elected to three-year terms on the board of directors were Robert W. Irwin, Van Steenberg, Clayton S. Hexton and Jelle Hexton, Grand Rapids; C. M. Maris, Grand Ledge; Robert Ficks, Jr., Cincinnati; Charles Kirchen, Holland, and Richard L. Swanson, Jamestown, N. Y.

Directors named to 1-year terms on the board as citizen representatives were Howard R. Sluyter, George V. Brandt, Eugene Richards, Charles O. Ransford and Edward C. McCobb.

A suggestion that Grand Rapids furniture exhibitors open their showrooms for public inspection was made by Malcolm Sherwood of New Albany, Inc., an executive of the Hooiser Panel Co. and guest speaker for the association.

* * *

New Berkey & Gay Firm Formed In Grand Rapids

Grand Rapids, Mich.—A new but "dormant" Berkey & Gay Furniture Co., which went bankrupt a year ago has been organized by First National Bank of Chicago. The incorporator is Attorney Conrad E. Thornquist, acting on behalf of the Chicago Bank.

* * *

Village Votes to Replace Factory Destroyed by Fire

Ionia, Mich.—The village of Lyons, near here, recently voted to use $50,000 in trust funds to build a new factory for the Ivan Clark Furniture Co., its principal industry, to replace one lost in a $200,000 fire last November.

"We are going to build just as fast as we can because Clark needs the plant and the village needs the employment and the pay it had for 62 workers," Village President Bernard Russell said.

* * *

American Excelsior Corp. Plant Chief Named

Grand Rapids, Mich.—Edgar W. Habighorst of Marinette (Wis.) has been named manager of the Grand Rapids (Mich.) plant of the American Excelsior corporation, 708 Hall-st., SW, here. He succeeds N. A. Cairns who retired after 33 years with the firm. Habighorst was manager of the plant at Marinette since 1936. The Grand Rapids plant manufactures excelsior and excelsior pads for packing and packaging.

* * *

Investigate Fire

Coldwater, Mich.—Fire Chief Lewis P. Zirn, who is conducting an investigation into a $300,000 fire at the Legg Lumber Co. here, indicated that the fire may have been of incendiary origin.

Under the company's charter it is authorized to manufacture and sell fabricated products.

* * *

Marquette Sawmill Destroyed by Fire

Marquette, Mich.—During a snowstorm here recently the Pete Raish sawmill was destroyed by fire. The mill and all machinery were destroyed, causing a loss estimated at approximately $50,000 by Freeman H. Raish, owner. The loss is partially covered by insurance. Raish said he planned to rebuild. The cause of the fire was undetermined.

Customer: "You made a mistake in that prescription I gave my wife. Instead of quinine you used strychnine."

Druggist: "You don't say. Then you owe me 20c more."

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VENEER KNIVES

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Labor Relations

Survey Shows Foremen Lack Training and Communication With Top Management

A recent survey conducted by the Labor Relations Institute, New York, shows that training of supervisors, and communications between them and the top level of management, leave much to be desired.

The LRI Opinion Research Division addressed questionnaires to 1,000 foremen in ten different companies, and received a 33% return—an unusually high percentage for a mail questionnaire.

The outstanding finding of the survey is the generally poor report foremen submit on the quality of their company's communications programs. Another outstanding finding of the survey was a difference of opinion on the part of foremen as to whether their companies *actually do* any of the following:

- Tell foremen about company working rules and regulations
- Tell foremen about new developments in personnel policies
- Tell foremen about trends in the company's business, outlook for the future, etc.
- Provide company-supervised training for foremen in handling employee relations.

Practically all the foremen questioned agreed that their companies *did* tell them about *working rules and regulations*. But on the other three points, sizeable, though minority percentages answered "No" or "Don't Know." The importance of this finding may be summarized as follows: Many foremen at specific companies are not aware of any company effort in affecting communications liaison between the supervisory and top levels of management, although it is equally obvious from a breakdown of individual company results that all of them have programs of this kind, however unsatisfactory they may be.

When the foremen were asked whether they would like to have their companies "get larger, stay about the same size, or get smaller," approximately eight out of ten answered "get larger." Thirty-six per cent of these listed "more opportunities for advancement" as the principal reason for this desire. Other important reasons were, "produce more," "employ more workers," "pride in company," "help the community."

The entire study, including a complete statistical breakdown and crosstabulation, is available at $.50 at the Labor Relations Institute, 1776 Broadway, New York 19, N. Y.

Foxboro Company Announces New Branch Office Cities

The Foxboro Company, Foxboro, Mass., manufacturer of industrial instruments for measurement and control, announces the opening of a new branch office at 123 W. College Ave., Appleton, Wis. The manager is Milton A. Schreiner, an instrument engineer associated with the company since 1922, principally in the industrial mid-west, with headquarters in the Chicago office. Having specialized on the instrument problems of the paper and pulp industry, he is widely known among paper mill men of Wisconsin and Minnesota.

The Appleton office brings to a total of 35 the cities in which Foxboro has branches or sub-offices in the United States. In addition there are the offices of Peacock Brothers, Ltd., in Canada, sales representatives in other countries, and factories of Foxboro subsidiary companies in Montreal and London, England.

Another new Foxboro office is at 6225 Brookside Ave., Kansas City, 2, Mo., where George J. Willier is manager. A member of several engineering societies, he has spent most of his business life in Missouri, where he has held positions with industrial concerns as well as State and Federal boards. He joined The Foxboro Company in 1944.

At Baton Rouge, La., John B. Deaderick is manager of the office recently opened at 115 North 19th St. During his years with Foxboro, Mr. Deaderick has had extensive experience, particularly in instrumentation for the oil and gas industry in the South and South west.

In addition to these full-staffed branches, Foxboro resident engineers have recently been headuartered in two new cities: Eugene F. Machell, at 209 N. 79th St., Milwaukee, 13, Wis.; and Russell E. Steward, at Frankfort, N. Y., serving the Utica area.

J. D. Linehan Elected to Binks Directorate

Mr. J. F. Roche, President of the Binks Manufacturing Company, announces the election of Mr. Joseph D. Linehan, to fill a vacancy on the Board of Directors of the Corporation.

Mr. Linehan is President of the Continental Plastic Corporation, 308 W. Erie St., Chicago. He is also a Vice President of Linehan, Inc., printers and lithographers, and a director of the Liberty Federal Savings and Loan Association of Chicago.

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NCS Liquid Resin Glue

Quality glues backed by years of use and experience . . . specifically formulated for the job for which they're recommended. For high-grade veneer work, for instance, National's manufacturing chemists recommend No. 1012 Casein or National Casein's Liquid Resin Glue.

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NCS No. 1012 Casein Glue is moisture resistant. Has two-day working life. Can be used at any temperature above freezing.

NCS Liquid Resin Glue is waterproof. Is available in the catalyst to meet your need. Can be used at any temperature above 70°.

Glues for all types of woodworking. Sash and door, joint work, millwork, corestock, doweling, bending, plywood, dimension stock. Outline your adhesive project and we'll provide the glue to do it correctly. No cost or obligation to purchase.

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Upper row, left to right: Phillips A. Hayward, Managing Director, H.D.M.A.; David B. Morgan, Jr., President H.D.M.A., Morgan Manufacturing Co.; James T. Ryan, Executive Vice President, Southern Furniture Manufacturers Association. Lower row, left to right, speakers' panel: Carl A. Rishell, Director Research, Timber Engineering Co., Washington; Prof. L. A. Patronsky, University of Michigan School of Forestry, Ann Arbor; Thomas D. Perry, Panel Leader, Engineer in Woodwork, Moorestown; C. R. Lockard, Southern Forest Experiment Station, Department of Agriculture, New Orleans; David B. Morgan, Sr., Morgan Manufacturing Co., Asheville; C. D. Dosker, President Gamble Brothers Co., Louisville.

Hardwood Dimension Mfr's Discuss Gluing Problems at 19th Annual

The glue forum or symposium was the outstanding event of the nineteenth annual meeting of the H.D.M.A., held at the Edgewater Gulf Hotel at Edgewater Park, Mississippi on February 9th to 11th, 1949. This session was a real workout for the members under the leadership of Thomas D. Perry. The gluing problems of the dimension manufacturers were examined from many viewpoints, after the following phases had been presented by the panel of speakers, who represented the supplier, the buyer, the user, the educator, the researcher and the consumer.

"Obligations of Glue Manufacturers," Thomas D. Perry, Engineer.

"Quality Control of Adhesives," Carl A. Rishell, Timber Engineering Company.

"High Frequency Gluing," David B. Morgan, Sr., Morgan Manufacturing Company.

"Glue Problems in Industry," C. D. Dosker, Gamble Brothers Company.

"Research in Glue Problems," Prof. L. A. Patronsky, University of Michigan.

"Glue Clinics," C. R. Lockard, Southern Forestry Experiment Station, Department of Agriculture.

The open discussion was eager and many questions were debated, pro and con, by those on the floor and on the platform. Many attending this session volunteered the statement that it was worth while coming for this event alone.

The Wednesday sessions included a luncheon, at which a movie of the Wood Office Furniture Institute was shown, a cleverly filmed story of the advantages and economy of better office equipment. In the afternoon talks were given by Louis J. Bosse, former executive officer of the H.D.M.A., Carl E. Miller and George W. Trayer. The latter enthusiastically outlined the "Future of Wood as Wood."

The annual banquet, held on Wednesday evening, was presided over by David B. Morgan, Jr., President of the H.D.M.A., who with Phillips A. Hayward, Managing Director, had made every conceivable arrangement for the comfort and pleasure of those attending the meeting. The dinner was followed by the premier showing of the movie of the Veneer Association, "Facts and Figures," which demonstrated the important place occupied by veneer and plywood in the making of a wide range of wood products, from midget radios to pianos and office desks.

Thursday morning, before the glue symposium, James T. Ryan, Executive Vice Prseident of the Southern Furniture Manufacturers' Association, spoke of "Furniture Production Trends for the Coming Year."

Friday was given over to the business session of the H.D.M.A., at which plans were outlined for association activities for the coming year. Over a hundred members, wives and guests attended, and many attendants remained over the week end to enjoy the hospitality of the Gulf Coast.

I noticed that the new pastor was delivering unusually short sermons. When I commented on their brevity to my husband, who doesn't like hard church pews, he glanced at me, pondered a bit, then drawled.

"That preacher knows what he's doing. The mind can absorb only as much as the seat can endure."

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From the baby 1 qt. capacity to a 50 gal. or more floor model, every Sta-Warm glue heater is built to the same high and exacting standards that assure savings in operational cost, savings in maintenance cost and long, useful life. Inquire today for descriptive folders.

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½ to 12 qt. glue pots with removable inserts.

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BOOKS

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Plywoods

Their Development, Manufacture, and Application

By Andrew Wood and Thomas Linn

A comprehensive book which gives even the reader a complete picture of what plywood is and does.

It will prove of great interest not only to manufacturers and users but also to agents and importers of plywood, as well as architects looking for the best medium for carrying out their designs and wishing to feel confidence in the materials they recommend to their clients.

It is profusely illustrated with original photographs illustrating the many varieties of plywood and its most useful applications.

Chapters on historical development; physical properties; manufacture (cutting, gluing, pressing); laminboards; grading, testing, packing, storing; wall panelling; application (very complete by products); appendix, (terms, late developments, charts of woods, etc.)

472 Pages—Fully Illustrated—$4.00.

Wood Technology

By Harry D. Tiemann

Rich in new data, this is the first book to treat every significant feature of that essential material—Wood. By a world distinguished authority, it is the only comprehensive study of the subject written in the English language.

Authoritatively, yet simply, the author discusses all phases and processes and the many uses of Wood. Significant material is provided on the mechanical, physical and chemical properties and on structure. Wood Anatomy, Wood Physiology, Timber Physics, Wood Chemistry and Timber Mechanics are among the classifications treated.

An indispensible identification key is featured in the abundant original material, numerous useful tables are provided in the appendix and references for more intensive reading on specific wood subjects are given at chapter endings. Excellently written and conveniently organized, this book is profusely illustrated with photographs and photomicrographs.

Unquestionably accurate, highly practical and readable, "Wood Technology" is a must for everyone concerned with the processing or use of Wood. Manufacturers, designers, engineers, woodworkers, lumbermen, foresters, craftsmen, instructors and students will welcome this superb work. Price $4.00 post paid.

Modern Plywood

By Thomas D. Perry

This book suggests new and less expensive methods of manufacture and construction; new products. Recent striking advances in the manufacture of Plywood have so broadened its use that a sound knowledge of this versatile material is invaluable to designers and executives in industries of all types.

Both manufacture and utilization are for the first time treated comprehensively and with authority in this, the only book published on Plywood in more than a decade. Techniques developed since the use of synthetic resin adhesives are fully and effectively described and brief, clear material is given on the earlier method of manufacture, which still has a definite place in the industry.

Valuably suggestive, the hundreds of vital uses of Plywood are conveniently classified into types such as Aircraft Construction, Furniture and the Allied Industries, Boats and Ships, Containers and Shooks, Construction and Building, Sporting Goods, Trunks and Baggage, etc. This material is indispensable to both new and established users of Plywood. Tabular matter hitherto unavailable or difficult to obtain is provided. Scores of pictures, charts, tables and drawings. Price $5.00 post paid.

Air Seasoning and Kiln Drying of Wood

By Hiram L. Henderson

This valuable book is extremely useful to the kiln foreman, woodshop foreman, sawmill superintendent, the mill owner or manager of a large or small factory where wood is converted from raw material into semi-finished or completely finished form. It is written especially for the use of sawmills, veneer mills, cooperage plants, and woodworking factories, where the proper solution of drying problems is of immeasureable value. The book contains 352 pages packed full of useful information on drying. It contains 222 clear illustrations, showing every phase of air seasoning and kiln drying of wood in every form. Price $4.75 postpaid.

Veneers and Plywood

By Knight & Wulpi

A very complete and authentic book on the history, application and manufacture of veneers and plywood. Published in 1927 it does not contain developments in the industry since that time, but for completeness and authenticity of subject material up to that date it is unsurpassed. An excellent reference book and a valuable addition to your wood products library. Profusely illustrated. 372 pages. Out of print and only a few dozen available at $5.00 per copy post paid.

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By Herman Hjorth

An unusually complete book which describes all the common types of woodworking machines without favoring any particular make. Included are detailed descriptions of all features of common woodworking machines and the principles upon which they operate. 384 pages. $3.50 per copy.

Synthetic Adhesives

By Paul I. Smith

A useful new reference book adequately describing the main types of synthetic adhesives, emphasizing their peculiar properties and main applications. It tells the works manager or foreman what adhesives will do a certain job in the quickest time consistent with maximum strength and reliability of bond under normal or even abnormal working conditions.

CONTENTS: Dry Gluefilm, Phenol-Formaldehyde Resin—Phenol-Formaldehyde Liquid and Solid Glues—Urea-Formaldehyde Glues—Cellulose Adhesives—Polyvinyl Cements—Acrylic Resin Cements—Chlorinated Rubber and Synthetic Rubber Cements—Miscellaneous Adhesives—Use of Synthetic Adhesives in the Manufacture of Aeronautical Plywood and High-Density Woods—General Application of Synthetic Adhesives in Industry. Illustrated. $3.00 per copy.

Commercial Timbers of the United States

Their Structure, Identification, Properties, and Uses

By Brown and Panshin

This book is a complete and thorough guide to the identification of commercial timbers of the U. S., and also gives information helpful to those concerned with utilization of wood. It covers in detail wood anatomy and distinguishing features of various types, gives keys for identification by gross and minute characters, and describes woods by species, with information on structure, properties and uses of each.

It contains a wide scope of precise information from most authoritative sources—anatomical studies, specific descriptions, identification keys, classified facts of structure, properties, and uses—arranged to be of most practical aid in the study of commercial timbers. 554 pages, 311 illustrations, $5.00 per copy.

Modern Wood Adhesives

By Thomas D. Perry

A new and authentic reference book on wood gluing.

The book is divided into sixteen chapters suitably illustrated and cross indexed for reference sources. The first nine chapters take up the various types of adhesives in detail giving their origin, advantages, limitations and applications. Chapters on the comparison, mixing and spreading, pressure, adhesion by heat, re-driers, impregnation and glue testing follow in that order.

After a foreword by Dr. Nelson Brown of the New York State College of Forestry, the book is divided into sixteen chapters suitably illustrated and cross indexed for reference sources. The first nine chapters take up the various types of adhesives in detail giving their origin, advantages, limitations and applications. Chapters on the comparison, mixing and spreading, pressure, adhesion by heat, redriers, impregnation and glue testing follow in that order. A glossary of terms and a bibliography at the end of each chapter rounds out this subject matter, all of which has been carefully arranged for the lay reader. Price, $3.00 per copy.

Wood Finishing and Painting Made Easy

By Ralph G. Waring

This handy manual answers every possible question on the selection and application of suitable finishes to wood and metal. From cabinetwork to bronze finishing the whole subject is covered briefly, simply, and with absolute accuracy, introducing the most recent techniques and demonstrating the use of the most modern equipment.

Chapters on Cabinet Woods and Their Accepted Finishes; Preparation of Work for Finishes; Wood Stains; Undercoaters; Fillers; Sanding; Spraying; Shop Equipment; Specifications; Methods; Metal, Toy and Fiber Finishing, and others. 228 pages, 100 illustrations, $2.75 per copy.

Principles of Woodworking

By Herman Hjorth

An entirely modern and comprehensive study of all the tools, processes, materials, projects, etc., required for a complete understanding of woodworking. Related subjects such as hardware, woods, upholstery and wood finishing are introduced by means of interesting projects. 308 pages, $2.00 per copy.

Operation of Common Woodworking Machines

By Herman Hjorth

An ideal manual for new help on the safe and efficient operation of machines used in modern woodworking. Each machine and its parts is described in the language of the beginner with step-by-step directions for using the machines. Spiral binding, 172 pages, $3.00 per copy.

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Car Trailer Growth Amazing

Detroit, Mich.—The urge of the American to hitch his house to the end of his car and go places has developed a multi-million-dollar business. Since the first motorists made their own house-trailers more than 20 years ago a series of firms has sprouted which today is grinding out more than 1,500 super-modern homes-on-wheels a week.

The trailer manufacturers quickly moved out of small buildings and utilized the complicated production-line methods from their parent auto industry to increase production rates. Trailer parks, catering to the needs of gypsy minded people have grown. There are about 5,000 such parks in the country.

D. D. Arehart, president of Palace Corp. of Flint, said he is convinced the trailercoach has become a permanent factor in American life. A survey recently showed 73 per cent of trailercoach owners prefer their freedom to apartment living.

Cabinet Firm Organized

Alexandria, Louisiana—The Jiffy-Phono-File Company, listed as a furniture business, has been granted charter of incorporation, and is authorized to engage in the manufacture, assembly, production, and sale of phonograph record filing cabinets and envelopes for filing phonograph records. Authorized capital stock was listed at $100,000. Stockholders are: W. George Bowden, A. C. Lowther and Percy T. Duty. Duty and Lowther are registered agents for the corporation.

Hayes Shows $3,270,000 Profit

The Hayes Manufacturing company, Grand Rapids (Mich.) showed a record profit of more than $3,270,000 in its business year ending Sept. 30, almost double the previous record profit of $1,667,175 in 1947, Renselaer W. Clark, president, reported recently.

Final results were tantamount to $3.08 a share on the 1,059,853 outstanding common shares and compared with $1.57 a share on the same capitalization in 1947.

Consolidated net sales amounted to $25,876,897 for a new high, fairly in excess of the preceding fiscal year's $24,457,182 total. Pre-tax income was $5,410,203, compared with $2,935,987 in 1947.

The Hayes company makes station wagon bodies, among other assemblies.

Santa Fe Sash & Door Company Incorporated

Canadian, Texas—Santa Fe Sash & Door Company, manufacturing, was granted 50-year-charter of incorporation January 17, 1949. Authorized capital stock was listed at $60,000. Incorporators: Nancy Bartlett, William Bartlett and Fermanetta Bartlett.

Furniture Manufacturer Dies

Andrew VanderLey, 52, president of VanderLey Brothers, Inc., Grand Rapids (Mich.), furniture manufacturers, died recently after a short illness. He resided at 2034 Paris Avenue, S.E. Surviving are his wife, Grace, and several children and relatives.

Hickory Preserves This Historic Peg

Little Rock, Ark.—A wooden peg, found in the heart of a hickory tree cut by the city Street Department on property of D. A. Bradley in the Brack Addition, probably was driven into the tree during the War Between the States, Mr. Bradley said. In the tree's growth the peg was encompassed. Mr. Bradley said he had found pieces of artillery shell in other trees.

Jackson Lumber & Tie Company Incorporated

Baton Rouge, La.—Wade O. Martin Jr., secretary of state, announced February 15, 1949, that charter of incorporation had been granted Jackson Lumber and Tie Company, lumber, Jonesboro, La. Authorized capital stock was listed at 100 shares, no par value.

Shipments of Furniture Up

Grand Rapids, Mich.—Although orders for furniture indicate some decline, shipments were 13 per cent ahead of average. Production in the furniture industry here is continuing to climb.

WOOD PRODUCTS CLASSIFIED ADVERTISING GETS RESULTS!

FILES BAND SAWS
THE ONE MACHINE— THAT FILES AND JOINTS HAND, BAND AND CIRCULAR SAWS
FILES HAND SAWS
FILES CROSS-CUT CIRCULAR SAWS

The Foley Automatic Saw Filer sharpens all saws from 3 to 16 points per inch that can be filed with a 3-cornered file. This includes cross-cut circular saws up to 24" diameter, band saws ⅛" to 4½" wide, and all types of hand saws.

It is not possible for the human hand and eye to equal the machine accuracy of the Foley, which automatically joints the saw as it files, bringing all high, low, large, small and uneven teeth back to uniform size, shape, spacing.

You'll hardly recognize your old saws after the Foley has put them back in perfect condition—and our 30-DAY TRIAL OFFER permits you to see the results on your own work. Write or send coupon for details.

FOLEY *Automatic* SAW FILER

FOLEY MFG. CO. 3308 N. E. 5th St., Minneapolis 18, Minn.

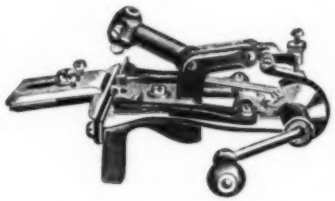
Please send literature, and details of your **30-DAY TRIAL OFFER.**

Name.....

Address.....

No. 8 Automatic

BAND SAW SET



Here is an automatic machine adjusted to fit any size tooth, and will set a saw up to 2 1/4" wide.

With this machine, you can set a saw in 5 or 8 minutes, according to the number of teeth.

Price $20.00

Woodworkers' Tool Works, Inc.

221 South Jefferson Street Chicago 6, Illinois

Personnel Changes

Bice Roth to Head Walnut Association

At its 32nd Annual Meeting in Chicago the American Walnut Manufacturers Association, Inc., elected these officers for the year 1949: as President of the Association, Mr. Bice Roth, who is Vice President and General Manager of Amos-Thompson Corporation, Edinburg, Indiana; as Vice President, Mr. Robert N. Hartzell, who is President of Hartzell Industries, Inc., Piqua, Ohio; and for Treasurer, Mr. Charles Crouch of the Campbell Lumber Company, Tullahoma, Tennessee. Mr. Burdett Green of Chicago, who is just completing his twentieth year with the Walnut Industry, was re-elected as Secretary and Manager of the group.

The Walnut Association was organized prior to World War I but first served actively in our national defense when called upon by the army to furnish gunstocks and airplane propellors during that war. Similarly, in World War II the Association saw that our own and allied requirements for gunstocks were taken care of, for walnut again was the only material that served satisfactorily for this exacting use. In peacetime the Association works primarily in the furniture, radio and piano trade where quantities of the nation's finest walnut is used.

Clark Joins Perkins Glue Staff

Laurence E. Clark, Jr. has been appointed to the laboratory staff of the Perkins Glue Company, Lansdale, Pa.

Mr. Clark, a graduate of Springfield College, has for several years been one of the leading chemists in the adhesive industry. His duties with the Perkins Glue Company will include the development of new products and customer technical service. Clarks excellent background in actual plant production problems, coupled with scientific training and experience, is expected to prove of great benefit to users of Perkins adhesives.

Mr. Clark is a member of the American Chemical Society and of the Forest Products Research Society.

M & M Appoints New Sales Mgr.

Portland, Ore.—Appointment of Verne Breitenbucher as vice-president in charge of sales of M and M Wood Working Company has been announced by President Herbert Malarkey. Widely experienced in business management the new vice president was formerly Western Manager of the Industrial Department of Peat, Marwick, Mitchell & Company, national accounting and auditing concern, in its Los Angeles office.

Breitenbucher's appointment is part of M and M's plan of expansion of its own organization, Malarkey stated, adding that the former's first concern will be to complete "the building of a strong national sales organization."

Mrs. Isabelle O'Hair will continue to serve in the capacity of assistant sales manager, it was announced. She has been with M and M Wood Working Company for 22 years.

R. T. Riggs to Head Zapon North Chicago Sales

According to an announcement received from Mr. G. B. Work, general sales manager for the Zapon Industrial Finishes of the Atlas Powder Company, Mr. R. T. Riggs has been appointed to the position of sales manager for the North Chicago, Illinois plant.

Mr. Riggs was with the Standard Varnish Company for nine years, five of which were spent as General Sales Manager in New York City. He then was with the Pittsburgh Plate Glass Company operating in the midwest territory for fifteen years. During this time he was a sales supervisor.

The Atlas Powder Company also has a plant in Stamford, Connecticut, where the sales manager is Mr. W. G. Sheane. The sales departments for both North Chicago, Ill., and Stamford, Conn., are under the direct supervision of Mr. G. B. Work who is general sales manager.

Irving Smith to Manage Monsanto Western Division

St. Louis, Mo.—The appointment of Irving C. Smith as general manager of Monsanto Chemical Company's Western Division in Seattle, Wash., was announced here by William M. Rand, president of the company. The appointment was effective March 1.

Mr. Smith has been assistant general manager of the division since January, 1948. He was appointed to succeed Harry P. Banks, vice-president of the company and general manager of the division, who will retire March 1.

At the same time, Mr. Rand announced that Robert U. Haslanger, who has been assistant to the general manager, will become assistant general manager of the Western Division.

Seattle, Wash. — Appointment of David S. Weddell as director of development for Monsanto Chemical Company's Western Division was announced here recently by Irving C. Smith, general manager of the Division.

Weddell, whose appointment is effective immediately, joined Monsanto in November, 1941, as a chemical engineer in the Phosphate Division's Research Department at the company's Anniston, Ala., plant.

Obituary

Spencer E. Roberts

Spencer E. Roberts, general manager of the Harbor Plywood Corporation, died suddenly of a heart attack at his residence, Feb. 20. He was 55 years of age.

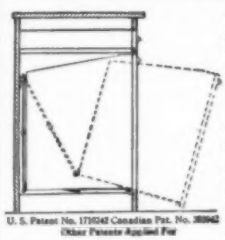
Mr. Roberts had been in the lumber business for many years. He was associated with Ralph C. Clark Company of Indianapolis, Ind., until that firm was merged with Harbor Plywood in 1928. He moved to Jacksonville from Pittsburgh, Pa., in 1942.

A native of Alexandria, Ind., he was a Mason and a member of Scottish Rite Bodies, active Rotarian, member of Southern Sash and Door Association, San Jose and Timuquana Country Clubs, and Florida Tackle and Gun Club.

Grant Dixon, Sr.

Mr. Grant Dixon, founder and president of the Western Pine Manufacturing Co., of Spokane, Wash., died at La Jolla, Calif., February 23.

"SLIDEWELL" BIN SWING



U. S. Patent No. 1715042 Canadian Pat. No. 383962 Other Patents Applied For

A Proven, Practical Hardware, for flour and sugar bins, vegetable bins or wherever bulk storage is used. It is easy to install and has fingertip control. It is entirely concealed therefore, can be used with any type finish hardware.

"SLIDEWELL" is easy to remove for cleaning — just unhook and bin is free. Among our thousands of satisfied customers are homes, hospitals, bakeries, army camps, etc. Made in two sizes, Standard Size for 75-lb. bins and Heavy Duty for 150-lb. bins. Write for descriptive circular, "The Law of Gravity in the Kitchen."

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VETERANS training is FREE under G. I. BILL

Learn **WOOD PRODUCTION ENGINEERING**

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It tells you how you can learn to become a successful WOOD PRODUCTION ENGINEER . . . by the Klok Home Study Correspondence Method . . . or by studying here in Grand Rapids in our Resident School . . . Training in WOOD PRODUCTION ENGINEERING offers you great opportunities . . . either to get a top position or to operate your own plant successfully.

The Klok Course teaches you SKETCHING, ROD-MAKING, DETAILING, STOCK BILLING, TIME STUDY, COST and MANAGEMENT.

WRITE FOR FREE BOOK TODAY! State preference whether Home Study or Resident course, with name, age, occupation and if veteran.

KLOK INSTITUTE

LEWIS ST. N. W. GRAND RAPIDS, MICHIGAN

Donahue Heads Door Manufacturers— Expand Educational Program

E. W. Donahue, president of the Wabash Screen Door Company, Chicago, was reelected president of the National Door Manufacturers Association at the 22nd Annual Meeting of the association held in Chicago, February 9 and 10, 1949. Other officers elected are as follows: Ross D. Scamehorn, Morgan Company, Oshkosh, Wis., vice-president; A. R. Tipton, Roach & Musser Company, Muscatine, Iowa, treasurer; Ormie C. Lance, Chicago, secretary-manager. Mr. Tipton succeeds Alvin F. Baal, Carr, Adams & Collier Company, Dubuque, Iowa, as treasurer.

In addition the following directors were elected at the Association's Annual Meeting: E. J. Curtis, Curtis Companies Inc., Clinton, Iowa; H. R. Dixon, Western Pine Mfg. Co., Limited, Spokane, Wash.; J. L. Hickey, Deer Park Pine Industry Inc., Deer Park, Wash.; Earl Kenyon, Long-Bell Lumber Co., Kansas City, Mo.; L. C. Paisley, Farley & Loetscher Mfg. Co., Dubuque, Iowa; J. D. Rowland, Andersen Corp., Bayport, Minn.; Frank Stevens, Wm. Cameron & Company, Inc., Wholesale, Waco, Texas; and J. F. Young, Anson & Gilkey Company, Merrill, Wis.

Ormie C. Lance, Secretary-Treasurer of the association, states that four important steps were taken at the meeting which will insure better service and high quality of Ponderosa Pine woodwork in the near future. Larger production is in prospect. "During 1948 our 30 member factories increased their production of doors, sash and frames approximately 11% of 1947 and with a somewhat improved supply of pine shop lumber should make a still larger increase in 1949" Lance said. "This should insure prompter shipments and better service in 1949 than the industry has been able to give since World War II. On the subject of improved quality, our members approved a resolution to make preservative treatment of all exterior woodwork standard industry practice thus insuring longer life and greater satisfaction with Ponderosa Pine windows, frames and exterior doors" said Lance in his report.

E. W. Donahue

Expand Program

Another forward step, according to Mr. Lance, will be the launching of a new educational program, nation-wide in scope, to point out to all segments of the home-building industry the savings in costs which can be effected by using modular dimensional products, including modular stock windows and sash. Details of the campaign are now being worked out by a special committee headed by Frank Stevens of Wm. Cameron & Company, Inc., Wholesale, Waco, Texas. The National Door Manufacturers Association adopted the modular standard in 1945 for stock windows and sash, thus replacing the ten or more local or regional standards. The building public is assured that Ponderosa Pine stock windows and sash will fit perfectly in any building of over-all modular design without wasteful cutting or fitting at the job site.

As a third step in NDMA's 1949 program, Mr. Lance reports that special committees will undertake the revision of the grading rules for doors, windows and frames in a determined effort to conserve lumber to the maximum without sacrificing quality or durability of stock woodwork products. A. C. Hammerand, Farley & Loetscher Manufacturing Company of Dubuque, Iowa, will head the Door Standards Committee, while C. K. Paine of Curtis Companies will head the Window and Sash Standards Committee. The fourth important program for 1949 will be the inauguration of a commercial standard for hardwood veneered doors, both solid-core and hollow-core. Thus far there has never been a nationally recognized standard for hardwood doors and this new standard will fill a long-felt want among wholesale distributors and retail lumber dealers; and will be of benefit to all users of hardwood doors.

If you use

Furniture Dimension, Flat Stock, Wood Parts

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Let Bruce supply your needs

Bruce specializes in quantity production of solid and glued-up Southern hardwoods, either completely or partially machined—and in flat dimension stock. Send us specifications or samples on items you need, and we'll tell you what we can do for you.

FACILITIES—Modern dimension plants at Memphis and Little Rock, centrally located for timber and transportation. Sawmills in Arkansas, Mississippi, and Alabama.

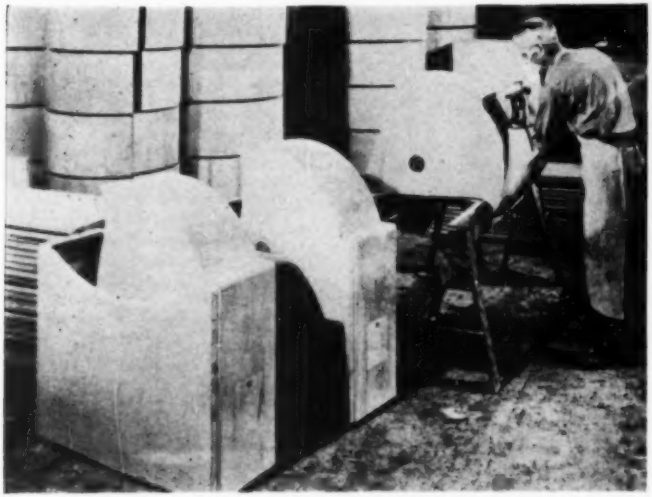
EXPERIENCE—Bruce has been producing furniture dimension for over 25 years. Leading furniture manufacturers throughout the nation can vouch for Bruce quality and service. Free technical and advisory service.

LET US QUOTE ON ITEMS YOU NEED

Write E. L. Bruce Co., 1692 Thomas St., Memphis, Tenn.

BRUCE **Bruce Wood Products**

SEND US YOUR INQUIRIES ON SOUTHERN HARDWOOD LUMBER



Electric Sander Proves Effective on Curved Surfaces

Effectiveness of the portable electric sander in finishing even extremely curved surfaces through the use of a special flexible sponge rubber pad attachment is a major factor in its popularity in furniture factories and cabinet shops. The orbital motion sanding action eliminates cross-grain scars since the sanding pad moves in a 3/16 inch orbit at a speed of 5000 cycles per minute.

It is said that users have speeded up finishing operations 300 per cent over hand methods as well as delivering more uniform sanding results. Other advantages are the use of standard 9"x11" sandpaper sheets which divide exactly into three pieces to fit the pad and one-hand operation, which relieves operator fatigue and permits use of the tool in hard-to-reach places.

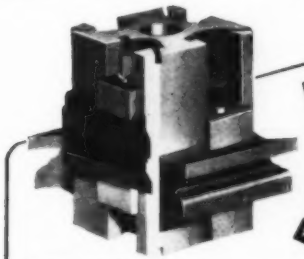
Production sanding speed is increased through the use of pre-loaded pads. In addition to the standard sanding pad and the special sponge rubber pad for curved surface sanding, a rubbing pad is also available for use with free abrasives, rubbing compounds, etc.

New Book on Ripsaw Practice

An outstanding book on ripsaw practice, written by John E. Hyler, and believed to be the only thing of its kind in print, has been released. The book not only discusses ripsaw blades at length, but goes into problems typical at different types of ripsawing machines, and is particularly to be commended because of the manner in which it stresses both safe and economical practice.

The book covers both production ripping in all of its phases and variety ripping on many kinds of special setups as practiced at the handfeed ripsaw, the latter machine being set forth as highly versatile. The book contains 61 drawings, and plainly will be of great value to woodworkers of all classes, wherever ripsaws of any kind are found in operation. Selling for $2.00 per copy, it may be obtained from John E. Hyler & Associates, Lock Box 112, Peoria, Illinois.

A failure is a person who has broken a contract with hope.



PUT THEM TO ANY *test*—

★ LONG LIFE
★ VERSATILITY
★ LOW COST
★ HIGH PRODUCTION

THE SHIMER COMBINATION HEAD

. . . a master tool for master craftsmen—for a wide range of woodworking jobs!

You'll cut costly set-up time and boost production with Shimer Combination Heads! They're available with milled-to-pattern bits that hold their pattern permanently for door and sash (either standard or special), as well as for matching, shiplap and mouldings of most any shape! Bits may be quickly and correctly set-up with convenient gauge furnished. Put the Shimer Combination Head to any test—it will quickly prove its value in your shop!

WRITE FOR YOUR FREE COPY OF OUR ILLUSTRATED PATTERN BOOK!

SHIMER

SAMUEL J. SHIMER & SONS, Inc.
75 RACE STREET • MILTON, PENNA.

GUM PLYWOOD SIZES UP TO 96"x 48"--

Installation of new machinery and equipment now enables us to supply Gum Plywood in the new larger sizes. We also feature FIGURED HARDWOODS in both veneer and lumber core construction up to 96" long by 48" wide, in standard thicknesses up to 1-1/16".

Permawood

Gum, Oak, Walnut, Birch, Maple, African Mahogany in standard sizes. Thicknesses 3/20" to 1-1/16" in all veneer construction. Lumber core construction 3/4" and 13/16".

Write today for our latest price lists.

DARLINGTON VENEER COMPANY, INC.
DARLINGTON, SOUTH CAROLINA

Mattison Machine Works Honors "Old Timers"

The above group were honored recently at the Mattison Association Dinner Dance for their record of service with Mattison Machine Works. Each has been with the company twenty-five years or more and was awarded a beautiful watch as a token of appreciation.

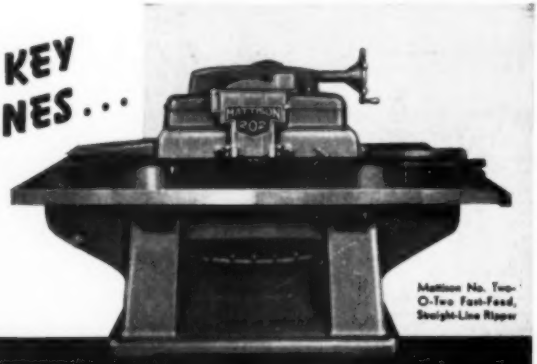
First Row: Arthur Anderson, E. J. Kohlhorst, N. Lindstrom, Lillian Parnham, Hazel Kaberg, Henry Larson, Gilbert Lane, Lyman Blaisdell, Joe Campoli, George Larson, Martin Olson.

Second Row: Ed Boots, Al Rose, John Szraiba, G. H. Lundgren, Jake Reecher, Carl Anderson, Albert Harszalek, George Clapper, George Nalley, Harry Freudenberger, Vernie Peterson, Anton Kardell.

Third Row: Rollo Kitzmiller, Arthur Shevland, Wm. Jensen, Anthony Grebas, Clyde Johnson, Robert Burns, Gustaf Johnson, Joe Johnson, Wm. C. Knapp, LaVerne McInnes, Wm. Rosenke, Arthur Blewett, Phillip Martin, Bert Johnson, Clarence Swenson.

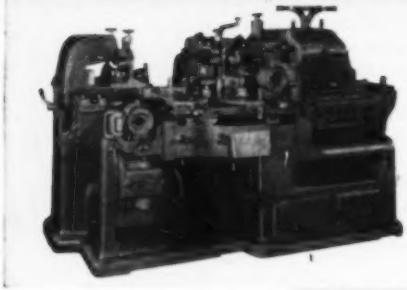
Gust Redmer and Peter Anderson were not shown on this picture.

TWO KEY MACHINES...



Mattison No. Two-O-Two Fast-Feed, Straight-Line Ripper

For Accurate, Fast Production



Mattison No. 276 Electric Moulder

Key operations are the foundation for work that follows, and not only is it necessary to have fast production, but also accurate results. With the Mattison Two-O-Two Ripper and Mattison Moulder you get both. Work comes through uniformly accurate insuring proper fitting of all parts and giving your products that look of quality that comes from precise fabrication methods. Fast production, fewer rejects and less waste provides lower production costs and helps considerably to keep the price of your finished product down.

ASK US TO SEND YOU COMPLETE INFORMATION

It will pay you to get all the facts on these two key machines.

MATTISON MACHINE WORKS

ROCKFORD · ILLINOIS

New Monsanto Booklet on Plasticizers

A most attractive and informative booklet has just been released by the Monsanto Chemical Co., St. Louis, Mo., which may be secured by users of plastics and plasticizers who request a copy on their letterhead.

Plasticizers are low melting solids or high boiling organic liquids. They are added to plastic compositions and surface coatings to extend or modify the natural properties of the resins and to develop new, improved properties not present in the resins themselves.

Tiny Sawmills Are Found

A mill-by-mill survey being made by the West Coast Lumbermen's Association has disclosed that the smallest sawmill in the Douglas fir region is in Clackamas County, Ore., according to James Duncan, the association's statistician. This particular mill reported a total cut of only 6,000 board feet of lumber in 1948. Among Washington's junior mills is one in Jefferson county, which is under a father-and-son operation. It cuts 500 feet of lumber a day when it works, and turned out 33,000 feet last year.

Union Pacific Maintains Fine Safety Record

Omaha, Neb.—As it had for 18 of the 25 years preceding 1948, Union Pacific operated last year with the lowest employe casualty rate among all Class A American railroads.

Union Pacific led the Class A railroads with a killed-injured ratio of 2.65 per million man-hours worked. This was approximately a third of the 7.41 average ratio for all Class A railroads and of the 8.39 average of all the railroads in the nation.

Offer New Pellets for Sap Stain Control

St. Louis, Mo. — Relatively dustless, rapidly-dissolving pellets of sodium pentachlorophenate are being offered by Monsanto Chemical Company, it was announced here today.

An industrial preservative and slime control agent, the chemical is sold under the trademark Santobrite. They are said to have several advantages over the presently available forms of this material.

According to H. C. Koehler, special products sales manager, the seed-like kernels are free-flowing and go into solution faster under static conditions because they do not paste.

The pellets are suggested for many applications, such as in cooling water systems, paper mills, for sap-stain control and paint and glue preservation.

Dr. Kropa to Head Borden Chemical Research Division

Dr. Edward Kropa

Dr. Edward L. Kropa will join the Borden Company's chemical division as chemical director on March 1, it was announced today by W. F. Leicester, Borden vice president. He will succeed Dr. John F. Corwin who left Borden's January 31 after five years' service.

For the past 12 years, Dr. Kropa has been with the American Cyanamid Company and has headed up its research on resins and plastics since 1943. He is also an adjunct professor of chemical engineering at New York University, a faculty post he has held since 1946. Dr. Kropa holds numerous U. S., British and Canadian patents in the field of resin plastics, and has specialized in the development of resins for the low-pressure milding field. Before joining American Cyanamid, he had been a research chemist at the Montclair, N. J., laboratories of Carlton Ellis.

He earned his doctor's degree in organic chemistry at N.Y.U., after studying at Wesleyan University. He is a Fellow of the American Institute of Chemists and is a member of the American Chemical Society and the New York Academy of Science.

As chemical director, Dr. Kropa will be in charge of research and chemical operations of the Borden division which manufactures Durite resins and molding compounds, Casco casein glues, Cascamite urea resin glues, Cascophen phenol resin glues, and other natural and synthetic products for industrial uses.

54 Graduate From N. H. L. A. Inspection Course

Memphis, Tenn. — Forty-four young men, who have completed the five-and-one-half-month course of instruction in the National Hardwood Lumber Association's school of hardwood lumber inspection at Nickey Bros. Inc. plant, were given certificates of proficiency at the commencement exercises at the Hotel Peabody on Feb. 11. The graduates came from many parts of the United States, from Canada and one was orgiinally from Poland.

Armour C. Bowen, president of the Lumbermen's Club of Memphis, a cosponsor of the school, delivered the commencement address.

As a reminder of appreciation for interest taken in them, the class presented to Mr. and Mrs. Nickey a leather-covered Morris chair.

B. M. Root Co. Advertising to the W. H. Long Co.

B. M. Root Company, York, Pa., specialists in woodworking and boring machinery for 41 years, has appointed the W. H. Long Co. of York to direct its advertising. Tradepapers and direct mail will be used. John R. Adams, vice president of the agency, is account executive.

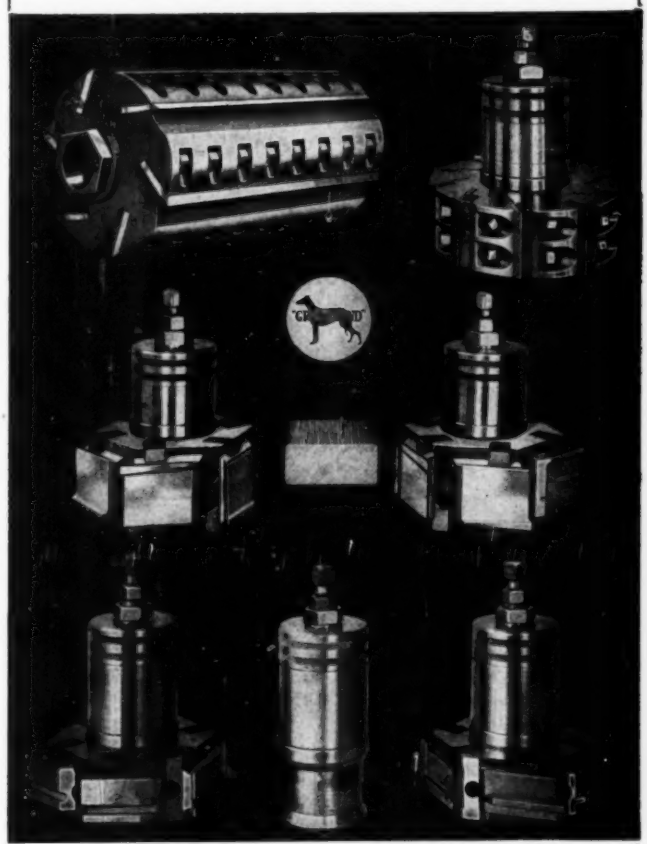
FPRS Third Annual National Meeting to Be May 2-4

The Third Annual National Meeting of the Forest Products Research Society is to be held at the Civic Auditorium in Grand Rapids, Michigan on May 2-4, 1949. This meeting, which will be the only national meeting of the Society this year, will be open to nonmembers as well as members and is expected to draw an attendance of more than 500 persons from all parts of the United States and Canada.

Six technical sessions have been scheduled, in addition to the annual business meeting at which new officers will be installed for the coming year. The general subjects to be discussed include raw material and its preparation, furniture and plywood, chemical utilization of wood, machining of wood, technical development of research, and seasoning. This meeting, which will include papers on a great variety of individual subjects, offers the best opportunity for all people concerned with the forest products industry to come together to discuss their mutual problems.

Plans for the meeting are under the general direction of Jac. H. Tigelaar, director of research and tests, Haskelite Manufacturing Corp., Grand Rapids. The program is being arranged by Edward G. Locke, First Vice President of FPRS and a chemical engineer with the U. S. Forest Service in Portland, Oregon.

CUTTER HEADS - - - For Every Possible Requirement



Jones & Orth Cutter Head Co.

SEATTLE, 14, WASHINGTON MEMPHIS, 3, TENN.

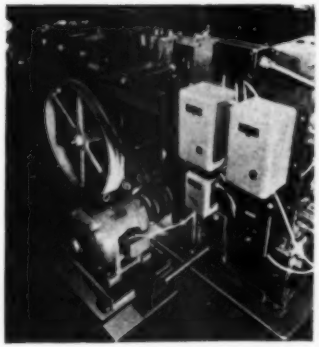
New Vari-Pitch Sheave Uses Angular Faced Discs

An economical and efficient form of speed control newly developed by Allis-Chalmers engineers for applicatoins requiring frequent speed changes or for making adjustments without shutting down the drive is now being employed for the first time in various wood-working and other industrial plants.

The combination consists of a new Vari-Pitch automatic sheave, companion sheave, wide range Texrope belts and Texslide motor base. It assures easier and smoother starting and is being used for motion control speed change ratios up to 2 to 1.

Desired speed variances of the driven machine are quickly obtained by simply turning the adjusting screw on the Texslide motor base with any commercial wrench. For increased speed, the motor is moved toward the driven machine; to decrease the speed, the motor is moved away from the driven machine. Adjustment is only a matter of seconds compared to 10 to 15 minutes required to vary the speed of a stationary control sheave, users state.

The drive is particularly applicable to high starting torque since it permits the belts to ride at smaller pitch diameters during acceleration. It can be mounted at almost any angle when the Texslide motor base is in a horizontal position.



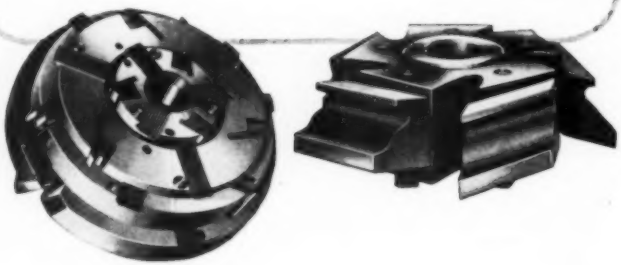
The new sheave utilizes the Vari-Pitch sheave principle of moving angular faced discs toward or away from each other, thereby changing the pitch diameter of the sheave as desired. An automatic belt tension stabilizer provides the proper sidewall pressure and belt tension regardless of the position of the belt in the groove.

The new sheave has been developed and standardized to accommodate standard motors from 3 to 20 horsepower with motor speeds from 900 to 1800 rpm.

G. M. DIEHL

CUTTERS and CUTTER HEADS

Give you clean, sharp cutting, true to pattern, from the simplest to the most intricate designs.



Our special dovetail design, choice of highest quality steel and over 36 years' experience in the manufacture of dependable cutters for the woodworking industry assure you the finest workmanship possible.

STOCK OR CUSTOM MODELS

Write for illustrated literature or send patterns for details and prices.

The G. M. Diehl Machine Works, Inc.

WABASH, INDIANA, U. S. A.

WHERE PRECISION CRAFTSMANSHIP IS HONORED

British Furniture Firms to Join In Research

A Furniture - Industry Development Council has been established in the United Kingdom, in accordance with an order of the Board of Trade effective January 1, 1949.

Among the many functions of the Council are the promotion of scientific research, improvement of design, setting up of minimum standards for furniture, and the development of export trade. In addition, the Council will act in an advisory capacity to the Board of Trade on any matters relating to the industry as a whole.

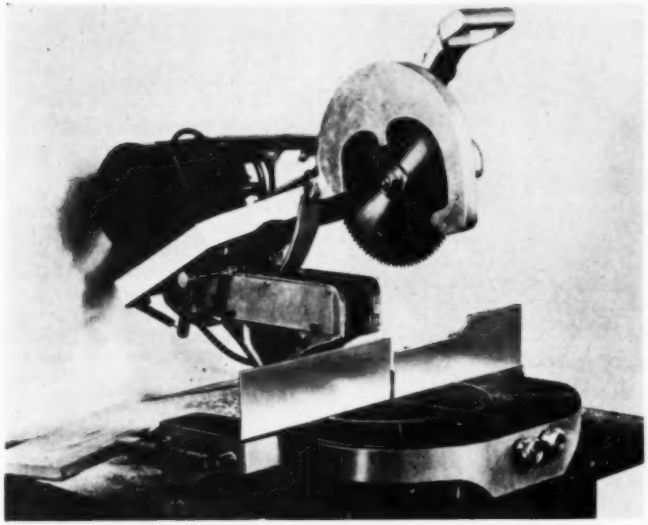
The order covers the manufacture of furniture commonly used for domestic purposes, other than that constructed wholly or mainly of metal. Firms engaged in the preparation of raw materials, finishing, or other ancillary processes will not be affected.

The income of the Council will be derived from a levy on all firms which manufacture domestic furniture, in proportion to the value of their production. This will be calculated so that the average annual income from the industry will not exceed £25,000 in any one year.

Lumber Industry in the Philippines

There are 342 sawmills with an aggregate daily capacity of 2,212,000 board feet in the Republic of the Philippines, compared with 163, with a daily capacity of 1,693,000 board feet before the war, stated the Philippine Bureau of Forestry.

The total investment in the lumber industry is placed at 49,000,000 pesos ($24,500,000), and the value of major forest products entering trade approximates 72,000,000 pesos. The forest industries provide employment for about 70,000 persons.



Hollywood Manufacturing & Supply Co. Announces New Multi-Purpose Safety Saw

One of America's pioneer builders of woodworking equipment and machinery has announced a new lightweight radial and chop saw for the woodworking, building and venetian blind industries.

Years of experimentation and actual tests are said to indicate that this saw will do what no other saw on the market today can do. It miters, it cross cuts, it chops, it vertical cuts, it rabbets and it grooves.

Simplicity of design and operation as well as new super-safety features mark this saw as one that is expected to be in great demand by all phases of the woodworking trade.

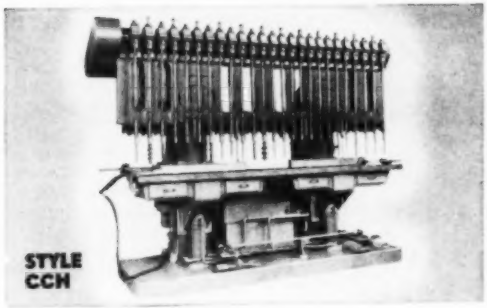
In addition to its operating features, this new saw is so light (only 116½ pounds) that it can be moved easily to every job, thus eliminating the necessity of moving lumber and materials to and from plant and job.

In addition to pioneering machines and equipment for the wood working industry, Hollywood has, for the past 15 years, manufactured high grade Venetian blind machinery. Within the past few months, there has ben released to the trade the Hollywood Speed-O-Matic hand fed cut and punch machine. New salvage tools and mitering tools as well as other machinery have also been recently developed. For further information on all types of machinery, write or call Hollywood Manufacturing & Supply Co., 720 Towne Avenue, Los Angeles, Vandike 5884 . . . or 513 W. Franklin, Baltimore, Maryland.

Tie Production, Poland

The production of 4,860,000 railway ties is scheduled in Poland during the next 2 years under a current 2-year plan, states the Polish press. Output totaled 2,860,000 ties during the forestry year ended September 1948, compared with 1,540,000 ties during the preceding forestry year.

ROOT BORING MACHINERY



ONE of Root's Boring Machines—Style CCH is a large multiple spindle hydraulic feed machine for boring as many as 44 holes in one time in stock 12 feet long. A labor saving machine for makers of agricultural implements, ladders, and other work requiring long stock.

Root's catalog shows the complete line of boring machines and lumber hoists. Write for Catalog 86-C today.

B.M. ROOT CO.
YORK, PENNSYLVANIA
Headquarters for Boring Machinery and Lumber Hoists for 41 years

"From Our Own Forests and Mills"

Anything in West Coast Woods

Manufacturers of:

Mouldings
Furniture Dimension
Glued-Up Stock
Industrial Shook
Venetian Blind Stock
Ready-to-Assemble Furniture Parts
in fact, Anything in West Coast Woods!

Send us your inquiries for
PONDEROSA PINE, SUGAR PINE, INCENSE CEDAR, DOUGLAS AND WHITE FIR

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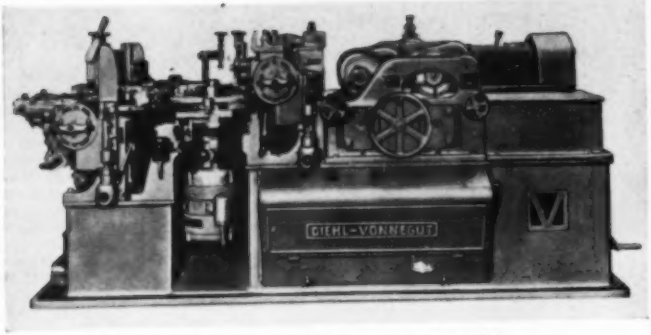

Diehl Acquires Vonnegut Moulder

Wabash, Indiana—Fred A. Collinge, President of The G. M. Diehl Machine Works, Inc., announced today that his company had acquired all the assets and manufacturing rights of the Vonnegut Moulder from the Vonnegut Moulder Corporation, Indianapolis.

"We have felt for a long time the need for a moulder in our line of woodworking machines," said Mr. Collinge, "not only to make our line more complete but to place us in a position to better serve the woodworking industry. We recognize the outstanding reputation and dependable performance of the Vonnegut Moulder and are proud to place it in the line of Diehl Machines. With the combined engineering skill of both companies, we will continue to build into this moulder the same high quality and dependable workmanship as in the past and will strive to improve its design and performance whenever possible. In the meantime, we offer it as the finest moulder on the market."

All new moulders manufactured by Diehl will be known as the "Diehl-Vonnegut" Moulder and will be sold through leading woodworking machinery dealers, the same as other Diehl machines.

Mr. Vonnegut stated that his company would continue to manufacture the Vonnegut Brush-Backed Sander and Abrasive Heads for sanding irregularly shaped wood parts and for polishing metal and plastic parts, and Marschke Grinders and Buffers in pedestal type, floor stand and swing frame machines. The sale of the Moulder Division to Diehl permits them to devote all their efforts to the production of these machines for both the woodworking and metal fields.

Present owners of Vonnegut Moulders are requested to contact The G. M. Diehl Machine Works, Inc., Wabash, Indiana, when in need or repair parts or service on their moulders now in use.

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Hawker Company Sold to Dayton Tool and Die Firm

The W. S. Hawker Sons Manufacturing Company has changed its name to The Hawker Manufacturing Company, and the entire capital stock of this company has been acquired by the East Dayton Tool & Die Co., Dayton, Ohio. The Hawker Manufacturing Co. will be operated as a corporate subsidiary of the East Dayton Tool & Die Co.

Equipment and inventory has been moved from the old Hawker factory. Mr. H. C. Darrow, vice president of the parent company has been appointed president of the Hawker Manufacturing Company.

MARKETS ★ FINANCIAL NEWS ★ PRICES

Atlas Plywood Sales, Profits at High Level

Unit production and shipments of plywood packing cases by Atlas Plywood Corp., traded on the New York Curb, are reported to have been maintained at capacity levels in the first six months of the fiscal year to end June 30. Additional outlets in the domestic market are understood to have absorbed the slack occasioned by a moderate recession in export demand as a result of the continuing dollar shortage. Net sales for the six months ended December 31 were around the peak level of the corresponding period of fiscal 1948.

That earnings for the first six months of the fiscal year held up well in the face of that policy is evident from the fact that the net income for the period is estimated at around $1,350,000, or about $2.25 a share on the 600,000 outstanding common shares. Such results, comparing with $1,698,940, or $2.83 a share, in the corresponding half of fiscal 1948, would provide ample coverage for the 62½-cent regular quarterly dividend, in effect since August, 1947. Meanwhile, unfilled orders, including newly concluded foreign business, assure high-rate operations for some months. Maintenance of current monthly average earnings for the remainder of the fiscal year would indicate net for the full year in the neighborhood of $4.50 a share.

Long-Bell Buys Harbor Plywood Stock

Long-Bell Lumber Company of Kansas City has been acquiring stock of Harbor Plywood Corporation of Hoquiam, Wash., in the open market since last November, according to E. W. Daniels, board chairman of Harbor Plywood. Long-Bell now holds more than 43,000 shares of the stock.

It is reported in financial quarters that J. M. White, president of Long-Bell, is slated to become a director of Harbor Plywood.

Georgia-Pacific Profits Double In '48

Gross sales of Georgia-Pacific Plywood & Lumber Co. (of Augusta, Ga.) rose 100.5 per cent during 1948 to a total of $48,287,823, compared with $24,075,962 in 1947, Owen R. Cheatham, president, revealed in reporting operations of the company at the highest levels in its 21-year history.

Last year's net profit, Mr. Cheatham reported in his annual statement to stockholders, totaled $3,457,528, equal after preferred dividend requirements to $4.48 per share on 756,368 shares of common stock outstanding. This compares with 1947 net of $1,785,666, or $2.27 per share on the basis of the present capitalization. The company split its common shares on a two-for-one basis in June, 1948. These shares were admitted to dealings on the New York Stock Exchange on Feb. 7 last, going directly from the over-the-counter market.

Fourth Quarter Lumber Shipments in Decline

February 25—Declining lumber prices in the last quarter of 1948 were responsible for curtailed production, according to the 71st Quarterly Report of the Lumber Survey Committee to the Secretary of Commerce.

There is a surplus of lower grade lumber at the mills and in the retail yards. Select grades are fairly well in balance with demand. However, "many marginal mills have been forced to close and the well established plants are curtailing production," according to the Committee.

The fourth quarter output was estimated to be 8,575 million feet and the total estimated production for 1948 as revised was 36.1 billion board feet.

The report pointed out that bad weather added to the factors which forced a curtailment of production. One reason for the high stocks is that retail yards are not stocking large inventories during this period of market uncertainty.

The demand for lumber for housing and furniture manufacturing is declining, but industrial and railroad demand continued high.

A survey of lumbermen throughout the country showed that another reason for the cautious approach at this time is the fear of pending legislation by Congress.

Shipments during the quarter were 10 per cent below production and new orders 15 per cent below production. Unfilled orders at the end of the year were 26 per cent of gross stocks as compared to 48 per cent in December, 1947.

Ups Reinspection Fee

Portland, Ore., Feb. 28—Charges for lumber reinspections by Western Pine Association inspectors will be raised from $25 to $30 per day on March 1, the association reported today.

W. E. Griffee, assistant secretary-manager, said that increased salary, hotel and travel expenses prompted the board of directors to boost the rates.

The new charge will be a flat $30 per day for the time required, including necessary time for travel to the job, for all shipments originating within the Western Pine Region. For reinspection of lumber shipped on Western Pine Association rules by mills anywhere outside the region, the charge will be $30 per day plus hotel and travel expense. The $30 plus expense rate will also apply on all certification work.

Government Buys Lumber

The Army and Navy Lumber Agency of the U. S. Corps of Engineers purchased over 24,000,000 board feet of various types of lumber at auction in Charlotte, N. C., announces Col. Willis E. Teale, district engineer. Lumber requirements for Navy, Marine, Air Corps and Army installations and for the Atomic Energy Commission includes a large amount of yellow pine and creosoted cross ties.

3,000,000 Pines Planted in Upper Michigan

Three million Norway and jack pines were planted in Upper Michigan in the fall of 1948 under the supervision of the U. S. Forest Service. Paul Wohlen, forest supervisor of five ranger districts in the Upper Peninsula, reported the planting began after Labor Day, when it was certain the trees are dormant.

Since 1928 the Forest Service has planted trees in the cut-over and fire-burnt lands in Upper Michigan. To date a total of 86,500 acres of successful plantings have been made by the Forest Service in the Upper Peninsula. Ray Knudson of the Forest Service in Escanaba (Mich.) is in charge of the timber management division in Upper Michigan.

Douglas Fir Output Declines

January lumber production in the Douglas fir region on the West Coast fell 260 million feet from the same month of last year to a total of 485,465,000 board feet as a result of severe winter weather, the West Coast Lumbermen's Association reports.

Deep snows delayed reopening of many logging camps and hundreds of small sawmills have been closed because of the resulting shortage of logs. The association reports that shipments during January kept pace with output, averaging 125,296,000 board feet a week.

Financial

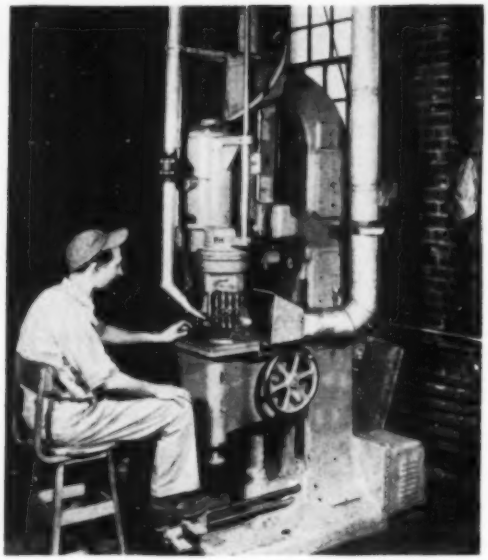
Pickering Lumber Corporation—Nine months to Dec. 31: Net income, $1,375,534, equal to $2.78 a share; no comparison available.

* * *

Weyerhaeuser Timber Co.—Dividend of 75 cents on the common, payable March 10 to stock of record March 3. The company paid 50 cents in each of the first three quarters last year, and $1.50 at the year end.

* * *

General Plywood Corporation, ten months ended October 31; sales, $6,494,000; net loss, $491,000. (D)



Root Machine Used for Boring and Counterboring Saw Handles

The accompanying illustration shows a rather unique use of a B. M. Root Company boring machine. This machine is used in the Philadelphia plant of the Henry Disston Company for boring and counterboring saw handles. It is equipped with two multiple spindle drill heads of five spindles each.

In operation, a handle is drilled and counterbored under one head then flipped over under the other head and drilled on the other side. This operation is done so that the holes are countersunk on both sides of the handle.

A set of drill heads is used for each size of handle manufactured on a production basis and the spacings of the spindles on the drill head conform to the design of the particular handle for which it is made.

Each individual spindle has a vertical sensitive depth adjustment, and the table has a spring loaded platen so that all of the holes are always countersunk evenly to a predetermined depth.

This Root machine known as the Style "G300" is hydraulically operated with a vertical spindle movement.

The feed strokes are either automatic or intermittent. The foot treadles, upon which the operator's foot is resting, are used to start, stop, or reverse the spindle motion at any point of the feed or return stroke.

Minimum Maintenance Cost on Acme Water Wash Booth

How Acme Water Sash Spray Booths keep maintenance costs to a minimum is described in two new bulletins just published. They show in illustrations and detailed description the four advantages of Acme booths that make lower maintenance costs possible.

Other advantages of these booths are described, too. A specifications chart for five standard sizes of cross-draft booths is included.

Write George Koch Sons, Inc., P. O. Box No. 358, Evansville 4, Indiana, for Bulletins Nos. 300A and 301A.

New Book, "Modern Timber Engineering"

Designed to serve not only as a textbook for college use, but also to provide practicing engineers and architects with information to guide them in the solution of design problems, a 147-page practical book on timber design, entitled "Modern Timber Engineering," is now available for distribution through the Southern Pine Association, New Orleans, Louisiana. The book is the third edition of the one originally published in 1942 under the title "A Course In Modern Timber Engineering" and revised in 1946. Co-authoris of the latest revision are W. Fleming Scofield, associate professor of Civil Engineering, University of Alabama, and W. H. O'Brien, Engineer, Southern Pine Association.

In addition to an appendix containing 19 tables and five figures and charts, the book has eleven chapters of contents. These chapters are devoted to structure and characteristics of wood, strength properties, loads and stresses, fastenings, beams, columns, trusses, decks and bridge floor systems, glued lamination, round timber piles, wood preservatives and fire resistance of wood construction. The book is available at $1.50 a copy.

White Pocket Lumber

Most recent publication of the West Coast Lumbermen's Association is an eight-page pamphlet entitled "A Talk About White Pocket Lumber."

In an easy-to-read style the pamphlet offers practical information on the characteristics and use of lumber containing "white pocket" or, as it is sometimes known, "white speck."

Copies of "A Talk About White Pocket Lumber," which fits a No. 10 envelope, may be obtained in quantity, without charge, from the West Coast Lumbermen's Association, 1410 S. W. Morrison Street, Portland 5, Oregon.

Consolidates Departments

Bakelite Corporation, Unit of Union Carbide and Carbon Corporation, announces the Laminating Division and the Adhesives Division of the Thermosetting Department have been consolidated. This division will be known as the Laminating and Adhesives Division. Harry Carlson has been appointed manager and J. L. Rodgers becomes assistant manager.

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Out in the shop

Hole Cutting Tools For Wood

Time inevitably brings changes of different kinds in all types of woodworking operations. As we consider what has been done and what is being done with regard to wood boring operations, we find activities which are not boring operations in the strict sense, but which nevertheless partake of the *nature* of boring operations. Holes cut with a hole saw or with other rather recently developed hole-cutting tools, cannot strictly be referred to as bored holes, but tools used for making them are sometimes provided with a shank like a boring tool, and are often held in a boring machine chuck.

Hole saws undoubtedly find just as broad application in cutting other materials as wood, and some of them are best adapted for cutting relatively thin materials. They are much used for cutting relatively large-diameter holes in relatively thin wood stock. With this in mind, one finds them highly useful for cutting such holes in plywood, which would be very difficult to cut to advantage with any ordinary wood boring bit. Wood bits having the usual type of cutting lips are not well adapted for boring holes in plywood, because such lips often lead in between the plies and produce a rough job, in addition to causing operating trouble.

Improvements in Hole Saws

Hole saws have been definitely improved since they first made their appearance. One of the greatest improvements was that of constructing them so their cutting blades were replaceable. Some of the older hole saws were so made that the entire tool had to be thrown away when the blade wore out. Too, as made by some, all hole saws had hacksaw teeth, and were therefore not as well adapted for cutting wood as for cutting metal. Some leading manufacturers of hole saws now provide them with 2-inch width of blade, so they will cut holes through relatively thick wood when desired. In addition, they are made as standard wood-cutting blades, having only four teeth to the inch. Tools of this type for cutting holes all the way from $\frac{7}{8}$" to $4\frac{1}{8}$" diameter may be obtained, and are popular with many.

Hole saws of this general type must have proper center support in order to start and to cut cleanly. In general, there are two ways of providing such center support. One of these contemplates pre-boring or pre-drilling the wood with small holes, and then using a central pin in the hole saw, which enters the small pre-bored hole and acts as a center support while the hole saw is cutting the larger hole.

The other method is to use a small-diameter drill instead of the central pin, allowing this drill to extend quite a little way beyond the saw teeth proper. In this manner, the center hole is drilled with the same motion as that used by the hole saw in cutting the large-diameter hole, and the method is therefore very economical of time. Use of the drill is therefore the preferred method except in cases where a considerable number of holes of smaller diameter are to be bored in the stock preliminarily on some type of multiple-spindle boring machine. Where this is done, two operations will be required in any case. Therefore, small holes can be bored in the first operation which will serve as pilot holes for later hole-saw guidance in pre-selected positions.

Spring-Type Throw-Outs

Whether a drill or a pilot pin is used in such hole saws for center support, a helical compression spring is used to encircle the central member. As the pilot pin enters the pre-bored hole or as the drill enters the wood, this compression spring encounters the surface of the wood. As the cut continues, this spring is compressed more and more. Thus, when the saw has penetrated the wood, and is withdrawn, this compression spring reacts to force the resulting small disc off the drill or pilot pin, as the case may be, thus automatically clearing the tool for the following cut.

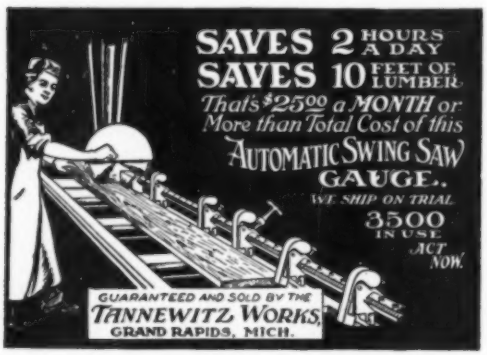
Barrel Saws

A hole-cutting tool bearing a fairly close relationship to the hole saw is known as a barrel saw. It is made from a piece of tool steel, externally turned to the size of hole it is desired to cut, and also turned with a shank at one end, so it can be held in a boring machine chuck. It is then machined out with a metal-boring tool from the end opposite the shank, to a considerable depth, thus leaving the tool steel in the form of a barrel or hollow cylinder. Sizes of such tools vary from 1-inch to 2-inch outside diameter, in increments of $\frac{1}{8}$". A steel wall of considerable thickness is left standing between the outside turned surface and the bore. On the resulting cup-type edge at the bottom of the tool, saw-type teeth are fashioned.

This tool is sufficiently rigid and small enough in diameter that it can be used without any center support. In fact, it has been largely used for cutting internal corners from chairs, tables, and like work, but it may be employed for boring in different locations where a wood-boring bit having a center point cannot be used to advantage. Sharpening of such a tool simply consists of filing the teeth on the rim from time to time, taking care to keep them as even in length as possible. If some of the teeth get longer than others due to the inability of the unaided eye to keep them exactly the same while filing, they can be "jointed" down to even length by mounting the tool in a boring machine chuck, and bringing the toothed end of the tool down on the side of a discarded abrasive wheel, while the tool is revolving and while the wheel is held flat on the table of the boring machine. This operation is similar to jointing a standard saw. Any long teeth will automatically be cut down by the abrasive wheel, making all teeth the same length. This jointing will then be subsequently used as a guide for filing of the tool.

Disc-Producing Barrel Saws

There is another type of barrel saw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which cuts holes in a considerably greater size range than either of those we have previously mentioned. It is made with a flange-type body, around which a piece of standard thin saw steel of considerable width is fitted in cylindrical form, so that teeth may be fashioned on the lower, cup-type rim. This tool really has a double purpose in woodworking operations. Either cutting of holes or production of wood discs may be chiefly in view. If cutting holes is the primary objective, outside diameter of the tool is the important diameter. If disc production is chiefly in view, the inside diameter of the barrel saw is the important one, since it determines the actual diameter of discs produced. Such barrel saws have been provided in diameters from 3 to 6 inches in increments of ½", and from that point up to 10 inches in increments of 1 inch.

Such tools are fitted with throw-out springs of automatic type similar to hole saws formerly considered. Thus they automatically clear themselves after each cut. They can be used without any center support, if desired. In fact, they *must* be so used if one is producing discs of wood in which center holes are not desirable. However, center holes are very often desirable in such discs, as for instance where toy wheels are being made in quantities. In such a case, one can specify the size of center drill to be used in such a tool, so the wheels will automatically be produced with the required size of drilled center hole. This is a splendid method of making toy wheels in various types of shops.

Core Stock Patching

Another rather extensive use for tools of this particular type is in factories making core stock, or in casket factories where wood parts being produced will later be covered with cloth or other material. In such cases, low-grade lumber containing many knots and similar defects may be used, and may have those defects repaired by cutting out the defect location with a hole saw, then fastening discs of sound wood in the holes thus produced. The usual method in such cases is to have two hole saws which differ slightly in diameter, the diametral difference being just great enough that a disc cut by one hole saw will snugly fill the hole cut by the other.

From this general type of tool another kind of hole-cutting unit has evolved. It substitutes leg-type cutters for the cylindrical thin saw steel arrangement. That is, four or more leg-type cutters are held by and extend downward from the flange-type member of the tool. Pockets of special type are machined in the flange-type member of this tool to receive machined ends on these leg-type cutters, so they are very rigidly and accurately held. Provision is made for locking the cutters in place with screws put through the periphery of the flange-type body. These leg-type cutters are set in such manner as to provide proper cutting clearance. Since the cutters are removable, it is a simple matter to sharpen them from time to time, as required.

With reference to using tools of hole-cutting type for patching corestock and casket parts, it is believed something else has been developed which has definite advantages as against the tools already cited. Considering lumber cores ¾" thick or more, the tool in mind is one which will remove a circular area only about ⅜" in depth, leaving it with a nice smooth bottom. Then, plugs are cut from material which is only about ⅜" thick. These are set and glued into the ⅜" deep circular pockets. Such procedure provides a more solid bearing for the circular patch applied, in addition to being more economical of actual patching material. Many defects do not go all the way through the core material. One-side defects may be patched on one side only. Where a defect does go all the way through, it is patched first on one side and then on the other. Holes or pockets cut on the two sides of the board for patching the same defect will never register exactly. Therefore each patch will have a better bearing in the corestock than any patch can have which passes all the way through.

Diehl Publishes New Cutter Catalog

A new 32-page Cutter Catalog has been compiled and published by The G. M. Diehl Machine Works, Inc., of Wabash, Indiana. This new catalog lists and illustrates the many type heads, knives, router bits, and grinders in the G. M. Diehl dependable line of cutters. Illustrations of various shape pattern

knives, simple instructions on "How to Order" together with net prices for heads or knives of all standard sizes are also shown.

This is the most elaborate and complete catalog ever published by Diehl in their 40 years of building cutters for the woodworking industry. A copy will be furnished on request. See your woodworking machinery dealer or write direct to The G. M. Diehl Machine Works, Inc., Wabash, Indiana.

Consolidate Los Angeles Offices

Los Angeles, Cal.—The consolidation of the two Monsanto Chemical Company sales offices here into one location was announced today by the company.

The offices located at 859 E. 60th Street and 605 W. Olympic Blvd. will be moved to 714 W. Olympic Blvd. The now office will handle sales of chemicals, plastics, adhesives and coatings.

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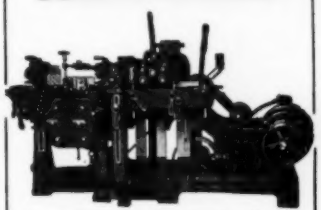

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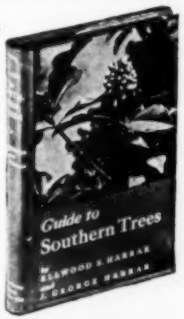

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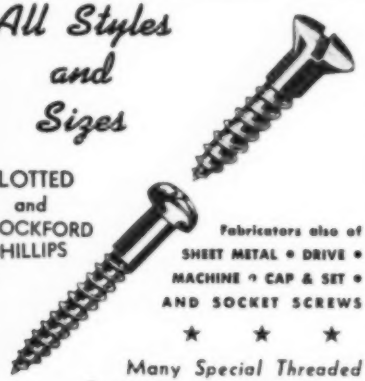

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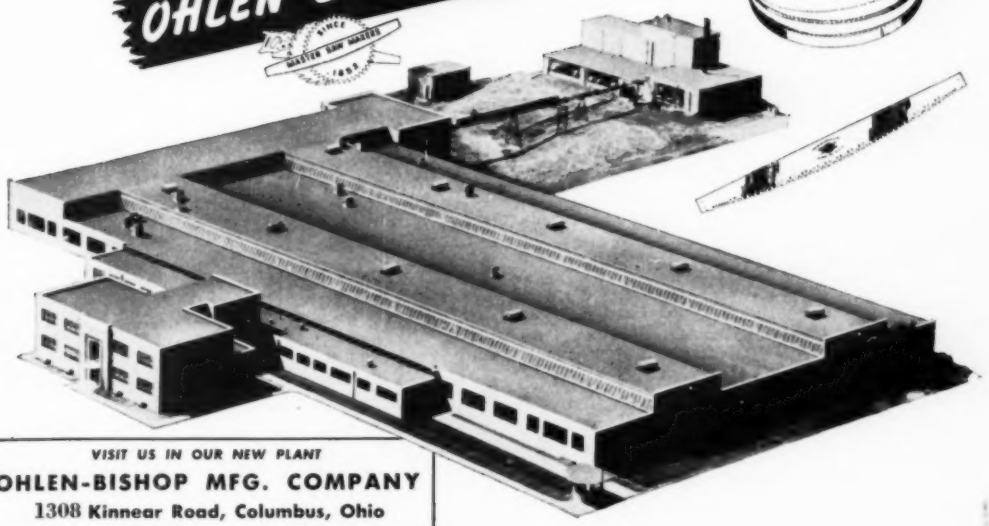

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